

EXHIBIT 2

FILED UNDER SEAL

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

**FAIR ISAAC CORPORATION, a
Delaware corporation,**

Plaintiff,

v.

**FEDERAL INSURANCE COMPANY, an
Indiana corporation, and ACE
AMERICAN INSURANCE COMPANY,
a Pennsylvania corporation,**

Defendants.

Case No. 16-cv-1054

Expert Report of
Steven R. Kursh, Ph.D., CSDP, CLP
Software Analysis Group
May 17, 2019

Steven R. Kursh, Ph.D., CSDP, CLP

CONFIDENTIAL – ATTORNEYS’ EYES ONLY

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I. INTRODUCTION

1. I am Steven R. Kursh, Ph.D., CSDP, CLP. I recently retired from the position of Executive Professor and Associate Academic Specialist at the D'Amore-McKim School of Business (DMSB) at Northeastern University where I was employed on a full-time basis for over twenty-three (23) years.

2. While at Northeastern I was responsible for teaching a standard, full-time faculty course load divided between the DMSB and the College of Engineering; participating in college and university governance activities; and, in accordance with the mission of the university and my position, conducting practitioner-focused research. One of the graduate-level courses that I developed and taught at Northeastern covered disruption in the financial and insurance services industries.

3. I have also developed and taught courses at Harvard University and the University of Pennsylvania, and I recently co-developed a course offered by the Massachusetts Institute of Technology (MIT) Enterprise Forum.

4. I have been admitted as an expert before arbitration panels, state courts, and Federal courts in numerous matters relating to computer software and e-commerce, including, but not limited to software implementations, software licensing, software development, and intellectual property. My work related to software, e-commerce, and, more broadly, intellectual property, has been cited by courts in their opinions and by arbitration panels.

5. I have approximately thirty (30) years of applied and practical experience in the computer and high technology fields, and business. This experience includes founding and serving as President of an enterprise software company that was acquired by a division of McGraw-Hill.

6. In my career I have been involved with negotiating, signing, and executing hundreds of contracts covering software and e-commerce licenses, joint development of products, marketing, distribution and sales, mergers and acquisitions, partnerships and other issues. This work has included, but is not limited to, contracts involving software used with mainframes, minicomputers, personal computers, data centers, PaaS, SaaS, cloud, mobile, and embedded in hardware.

7. I am a former Fulbright Scholar and the author of numerous articles, cases used in education, and a book published by Financial Times Prentice-Hall. I serve as a reviewer for AAAS (American Association for the Advancement of Science), IEEE (Institute of Electrical and Electronics Engineers) and numerous academic and practitioner publications in business, technology, and finance.

8. I provide further information regarding my background and qualifications below. Additionally, my current curriculum vitae, including a list of my authored publications in the past ten years and a list of cases where I have testified as an expert at trial or by deposition in the last four years, is attached hereto as Appendix A.

9. Appendix B provides a listing of the materials I considered in my work on this matter.

10. Appendix C provides copies of material that I reference in this Report.

II. MY RETENTION IN THIS LITIGATION

11. I have been retained as an expert by FEDERAL INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (“Federal” or “Defendants”) in connection with *FAIR ISAAC CORPORATION, a Delaware corporation* (“FICO” or “Plaintiff”) v. *Federal INSURANCE COMPANY, an Indiana corporation, and ACE AMERICAN INSURANCE*

COMPANY, a Pennsylvania corporation, Case No. 16-cv-1054 in the United States District Court, District of Minnesota.

12. I have been asked to provide my independent opinions regarding whether FICO's conduct in response to the merger between Chubb Corporation, Federal's parent entity, and ACE INA Holdings, Inc. (the "merger") was commercially reasonable based on the parties' license agreement, the parties' customs and practices, and the customs and practices in the software industry. I have considered whether FICO's conduct and negotiations related to the merger and FICO's demand for further license fees for the use of Blaze Advisor® software (henceforth "Blaze") following the merger is supported by FICO's own pricing policies, the agreements between the parties, and industry customs and practices. Finally, I have been asked to review and comment, when appropriate, on the opinions expressed in the recent reports from Mr. Whitener and Mr. Zoltowski, the experts retained by counsel for FICO.

13. As discussed in more detail below, I have based my opinions on my review of the evidence in this matter, publicly-available documents, and other information, as well as my knowledge, skills, experience, training, and education.

14. My opinions are detailed in this report and are based on the set of facts and data made available to me. The facts and data made available to me were sufficient for me to reach my opinions. When analyzing the facts and data, I used reliable principles and methods.

15. I reserve the right to change or add to this report as new evidence becomes available, including, but not limited to opinions from FICO's experts. I understand that the Court recently ordered FICO to produce additional documents and information, and that all of the documents and information have not been provided as of the date of this report. I specifically reserve the

right to update and supplement this report and my conclusion based upon additional documents and information provided pursuant to the Court's Order.

16. Should this matter go to trial, I plan to use one or more exhibits or computerized presentations summarizing or supporting the opinions made in this report and other work that I do related to this matter. I may, for example, use a PowerPoint slide show to summarize my report and support my opinions. The slide show may include materials taken directly from this Report and other work related to this matter. I also may use any of the materials that I have relied on in generating this Report and other materials related to this matter as exhibits at trial, and I may highlight or otherwise summarize those exhibits to assist me in explaining my opinions.

17. I am being compensated at the rate of \$695/hour. My compensation is not dependent upon the content of this report or the outcome of this matter.

III. LIMITATIONS AND QUALIFICATIONS

A. Limitations

18. I am not a lawyer and this report provides no legal opinions. Rather, I have reviewed the facts in this case and drawing from my knowledge, skills, experience, training, and education have provided my opinions relating to the actions of the parties in this matter.

B. Educational Background and Earned Certifications

19. I earned an A.B. degree from Boston College majoring in Political Science with extensive course work in Economics. I was in the Honors Program and graduated *Magna Cum Laude, Scholar of the College* as of May 1975. I earned a Ph.D. from the University of Pennsylvania as of May 1983. My major course work and Ph.D. preliminary examinations were

in Housing and Real Estate, Finance (Wharton School), and Marketing (Wharton School). I took courses in Accounting, Economics, Statistics, and Econometrics that required extensive use of computers including writing software programs.

20. As a graduate student at the University of Pennsylvania, I developed and taught graduate-level courses in Real Estate Finance and Statistics. I also was awarded research and teaching fellowships.

21. I was honored to be selected from among other Ph.D. students to serve as a grader in the Wharton MBA Marketing and MBA Marketing Research (essentially applied statistics) courses.

22. I have been on research teams that have obtained grants from Federal agencies and foundations, including, but not limited to, the U.S. Department of Housing and Development, the U.S. Department of Energy, the Kauffman Foundation, and the General Electric Foundation. My work with HUD and the Department of Energy involved the development and testing of economic models, including risk assessments and econometric analyses.

23. I am the inventor of U.S. Patent No. 7,110,952, the title of which is “Computer accounting method using natural language speech recognition” (the ’952 Patent). My patent is dated September 19, 2006.

24. I earned the CSDP (Certified Software Development Professional) certification from the Institute of Electrical and Electronics Engineers (IEEE) Computer Society in June 2004.¹ Earning this certification requires documentation of at least 9,000 hours of professional work in software development and passage of a rigorous examination covering the Software Engineering

¹ <http://www2.computer.org/portal/web/certification>. Candidates for the CSDP also need to show at least 9,000 hours of experience in at least 6 of the 11 knowledge areas the exam covers. *See* <http://www2.computer.org/portal/web/certification/about> for more information.

Body of Knowledge. I was recertified as a CSDP in June 2007, February 2010, and February 2013.²

25. The initial certification as a CSDP and the recertifications reflect an independent review by my peers of my knowledge, training, and expertise including, but not limited to industry customs and practices in software development and practices.

26. I have also earned the Certified Licensing Professional (CLP) designation from the Licensing Executives Society USA and Canada, Inc.³ The CLP certification is a professional designation intended to distinguish professionals who have demonstrated experience and knowledge about, as well as proficiency in licensing and commercialization of intellectual property through involvement in negotiations, marketing, valuation, intellectual property rights, negotiation, and intellectual asset management. I originally earned the CLP as of July 1, 2008 and have been recertified on multiple occasions.

27. The present requirements for the CLP are at least three years of professional experience in the licensing field; proficiency, knowledge, and exposure to licensing and commercialization of intellectual property; and passing an examination.

² The IEEE Computer Society recently decided to eliminate the need for recertification of the CSDP and has replaced the CSDP with other certifications.

³ The Licensing Executives Society, USA and Canada describes itself at its website www.lesi.org as: “Established in 1965, the Licensing Executives Society (U.S.A. and Canada), Inc. (LES) is a professional society comprised of over 6,000 members engaged in the transfer, use, development, manufacture and marketing of intellectual property.

The LES membership includes a wide range of professionals, including business executives, lawyers, licensing consultants, engineers, academicians, CSientists and government officials. Many large corporations, professional firms, and universities comprise the Society's membership...

Licensing Executives Society (U.S.A. and Canada), Inc. is a member society of the Licensing Executives Society International, Inc. (LESI), with a worldwide membership of over 12,000 members in 30 national societies, representing over 80 countries...” See, <http://www.usa-canada.les.org/aboutus/>.

28. I presently serve on a sub-committee of the High-Tech Sector committee of the Licensing Executives Society. I also actively participate in webinars and other activities related to licensing that are sponsored by LES.

29. I remain up-to-date with software technologies, licensing, and business issues by participating in courses offered by the Association for Computing Machinery (ACM), the Institute for Electrical and Electronics Engineers (IEEE), the Licensing Executives Society (LES), the Angel Capital Association and other organizations; participating in academic conferences; attending trade shows; and other activities, including, but not limited to, reading academic and practitioner publications and websites.

30. I have researched and published articles in practitioner and academic journals on topics related to software technologies, software valuation, and other issues.

C. Career History and Licensing Experience

31. I have approximately thirty (30) years of applied and practical experience in the computer, high technology fields, and business. This experience includes founding and serving as President of an enterprise software company, Blackacre Financial Software, Inc. While at Blackacre I was directly involved in reviewing and negotiating hundreds of agreements with licensees, resellers, VARs, dealers, OEMs, distributors, development partners, and other organizations.

32. We maintained licenses with other companies that enabled us to embed their software into our software; we also licensed our software under “white labels” to several systems integration, software, and hardware companies. Our software was used as a “tool” embedded in software used in mortgage-related activities at major financial institutions.

33. I led teams and personally worked with partners who sold and provided related services to our products, including customization and configuration, client support, and integration services. A key part of the customization and configuration work involved the development and use of rules and variables.

34. I successfully exited Blackacre Financial Software, Inc. by selling the assets to a division of McGraw-Hill, retired for a brief period, and then returned to academic research, teaching, and consulting.

35. My work experience as a consultant and/or expert witness includes reviewing, negotiating, signing, and executing hundreds of contracts covering software and e-commerce licenses, joint development of products, marketing and sales, mergers and acquisitions, partnerships, distribution, and other issues, including outsourced services. This work often includes economic analyses and risk-assessment modeling.

36. Prior to founding Blackacre Financial Software I worked as a consultant in the financial services industry. My work included the development and assessment of models and related frameworks for assessment and management of risks in commercial lending and personal lending.

37. I was named a Fulbright Scholar in 2005 by the Fulbright Foreign Scholarship Board and the Bureau of Education and Cultural Affairs of the United States Department of State. I spent the Fall 2005 semester in Warsaw, Poland conducting research and teaching courses related to innovation, particularly in software and e-commerce, information technologies, and finance.

38. I am the author of a book published by Financial Times Prentice-Hall, and the author of numerous academic and practitioner publications. A portion of my research and teaching has been supported by grants from the GE Foundation and the Kauffman Foundation.

39. I am the founder of Software Analysis Group, a consulting firm that provides services to corporations, private-equity firms, and legal counsel (<http://www.softwareanalysisgroup.com>).

40. I have gained additional expertise in numerous consulting and expert witness engagements for clients including, but not limited to, Bank of America, Invesco, HSBC, Citicorp, Actuate Software, Websense, Avaya; Samsung, Toyota, Home Depot, Verizon, the Regents of the University of California, private equity firms; and regional businesses.

41. I serve as a reviewer for the Research Competitiveness Program for the American Association for the Advancement of Science. Previously, I served as a General Editor and Reviewer for the Custom Business Resources Program in Finance and in Information Technology for Pearson Education.

42. I am a member of several professional and trade organizations, including the Association for Computing Machinery (ACM), the Institute of Electrical and Electronics Engineers (IEEE), and the Licensing Executives Society (LES). I was a registered member of the IBM Academic Initiative (formerly known as the IBM Scholars Program) while a full-time faculty member.

IV. SUMMARY OF OPINIONS

43. This Summary of Opinions is intended to be an overview. A full description of my opinions is contained throughout the narrative to this report and the associated exhibits.

44. My findings are as follows:

45. FICO's unilateral actions in this matter are not commercially reasonable given industry customs and practices in software licensing. These unilateral actions include, but were not limited to, the following:

- Asserting the license agreement did not allow uses the parties agreed to in 2006, and that the parties acknowledged throughout the licensing relationship prior to the merger in 2016;
- Leveraging the merger to extract more money from Federal based on a commercially unreasonable interpretation of the Parties' prior agreements;
- Demanding further license fees that ignore the terms of the license agreement, ignore Federal's actual use of Blaze, and are not supported by Blaze's actual fair market value; and
- If it is found that Federal needed any form of "consent" following the Merger, unreasonably withholding that consent without any evidence or knowledge of expanded use of Blaze following the merger and then attempting to terminate the Agreement.

46. I will provide detailed explanations regarding these findings below. Prior to doing so, however, it is important to provide some general background about the software industry and licensing. This will provide context in regards to FICO's actions in this matter.

V. INTRODUCTION TO THE SOFTWARE INDUSTRY

A. The Software Industry

1. Overview

47. Software “in its most general sense, is a set of instructions or programs instructing a computer to do specific tasks. Software is a generic term used to describe computer programs. Scripts, applications, programs and a set of instructions are all terms often used to describe software.”⁴

48. The software industry can broadly be defined as businesses that develop, maintain, and sell usage rights via different business models and delivery methods.

49. The primary categories of software include:

50. Operating system – An operating system, like Microsoft Windows or Linux, is software that acts as an intermediary between the user and the computer hardware to handle input, output, memory allocation, and task scheduling.⁵

51. Application software – Application software is designed to sit on top of the operating system and perform a suite of functions, tasks, or activities for the end user. It includes the graphic user interface (GUI) that the user interacts with in order to control the computer. Programs such as Microsoft Word, an accounting program, or a computer game are all examples of applications. There are numerous types of applications such as desktop applications for

⁴ <https://www.techopedia.com/definition/4356/software>.

⁵ Stallman Richard M, “Free Software, Free Society: Selected Essays of Richard M. Stallman,” Boston : Free Software Foundation, 2002. A copy of this publication is in Appendix C.

personal computers; web applications that are programs that run over the Internet; and mobile applications that run on smartphones, tablets and other mobile devices.⁶

52. Utility applications – Utility programs are meant to help system administrators and computer programmers maintain and service their computer networks.

53. System software – System software controls and directs certain functions of the hardware. Examples of system software include Boot programs, Embedded programs, and Microcode programs. All of these programs are installed as part of the computer hardware manufacturing process and are not able to be modified and are not visible to the end user.

54. There are also divisions by customer type (*e.g.*, consumer or enterprise), hardware platforms, functionality, distribution, open source, proprietary or mixed, and other variables.

2. Licensing and Distribution to Licensees

55. There are two common methods of how software is licensed and delivered to licensees.⁷

The first method is “software as a product” which is when “...you purchase a restricted license to use the software.”⁸ Pricing includes an upfront cost based on a metric (*e.g.* number of seats, processors, simultaneous users, *etc.*) that the software vendor has established and then reoccurring costs for maintenance and support, and, often updates. With software as a product,

⁶ Stallman Richard M, “Free Software, Free Society: Selected Essays of Richard M. Stallman,” Boston : Free Software Foundation, 2002.

⁷ Given the nature of this matter I am excluding applications written for and used on mobile platforms in this discussion. These applications are obviously also software. I am also excluding software that is embedded in hardware.

⁸ <https://www.pragmaticmarketing.com/resources/articles/the-economics-of-software-as-a-service-saas-vs-software-as-a-product>. I am refereeing this independent, third-party site by way of explanation and background. There are numerous other sites that have similar information and, just as importantly, what I am writing regarding software licensing and distribution channels is well-known and recognized in the software and, more broadly, technology industry.

the customer has to account for additional costs such as hardware, IT administrators, physical space, as well as other expenses.

56. The second method is “software as a service” or “SaaS” which is when “...you purchase a right to use the software.”⁹ The pricing is in the form of a reoccurring fee based on a metric (e.g., users, numbers of sites, functionality). With SaaS, the costs for managing the hardware, software and upgrades are usually included.

57. In both scenarios, “you are purchasing the right to use the software”¹⁰ and the “SaaS model ultimately provides the same type of products as a software licensing model.”¹¹

B. Enterprise Software License Agreements and Other Contracts

58. Two customary practices in software licensing are:

59. First, it is important to recognize that license agreements are negotiated and that the negotiations have become increasingly more complex over time in response to changes in technology, greater competition among software vendors, user needs and globalization among other factors.

60. Second, “discounts” on software licenses are generally a standard part of the licensing process. The word “discount” is a misnomer in this context because generally no licensee pays whatever the claimed list price is for a certain software product. There is no “magic” discount level that is readily applied among companies or for specific software products. Depending on

⁹ <https://www.pragmaticmarketing.com/resources/articles/the-economics-of-software-as-a-service-saas-vs-software-as-a-product>.

¹⁰ <https://www.pragmaticmarketing.com/resources/articles/the-economics-of-software-as-a-service-saas-vs-software-as-a-product>.

¹¹ <https://www.pragmaticmarketing.com/resources/articles/the-economics-of-software-as-a-service-saas-vs-software-as-a-product>.

the elements of a specific transaction, discounts can range from more than 20 percent to as high as 90 percent.¹² In some circumstances, the license fee is near zero or zero. As such, a software company's listed license fees seldom reflect the actual market rate paid by licensees of the product.

1. License Terms

61. Customs and practices in the industry are such that when negotiating contract terms, the parties to an agreement expect that the agreement will be implemented between the parties in a manner consistent with customs and practices in the software industry and that takes into account the licensee's specific circumstances unless otherwise noted in the agreements between the parties. In my experience in licensing and, more broadly, business and consulting experience in the software and e-commerce industry, when parties define terms in contracts and then refer to those terms, they intend to refer to the defined terms and, conversely, when they do not refer to those defined terms, they do not intend to invoke them.

C. Background on Software and Services Pricing

62. A key factor in understanding and analyzing pricing in the software industry is the industry's relatively unique economics. More specifically, since software is essentially an intangible good it can be replicated at near-zero marginal costs. This fact enables licensors to offer pricing for software licenses that appears to be low, however, the total revenue and other benefits from the license sale will be higher given that the purchase by the licensee will typically include services, ongoing maintenance, upgrades and additional use, updates, reference, and opportunities for more revenue from additional license sales of other products and services.

¹² Stephen Swoyer, "What's Cheaper SQL Server or Oracle? Tricky Question, Grasshopper," *Redmond Channel Partner*, September 13, 2004. A copy of this article is in Appendix C. I discuss FICO's pricing in more detail below.

63. From the perspective of a software company, there is little or no cost in giving away software programs/rights in a “package deal” to a customer if the customer offers potential revenue streams in related products and services, reputational benefits, or other benefits. For example, it would not be unusual for an enterprise software company to license rights to as many as ten to twenty applications to a customer who only initially intends to implement a handful. Revenue from license sales are oftentimes secondary, at the time of license and thereafter, to other revenue sources.

64. In fact, some software vendors, (*e.g.*, RedHat, open-source vendors) follow a strategy of giving away software products and making money from other revenue sources such as updates, maintenance, support, supplementary products that might be used if readily accessible to end-users, and other related activities.

65. Software companies will discount the prices of their software licenses by significant amounts, often to near zero in order to obtain other, potentially more valuable revenue streams. For example, a software company may license software at a relatively low price where the licensee presents an opportunity to keep the software company’s “bench” of consultants who do customization and configuration work occupied and billing time.¹³

VI. FICO’S PRICING METHODOLOGY

66. FICO has a Global Price List and discount schedule, which provides:¹⁴

¹³ My research found that FICO provided deep discounts on many initial licenses, including, for example, licensing its software at zero cost to the licensee. See, FICO’s software license agreement with Accenture LLP in 2008 that included a 100% discount. FICO 0047383 – 47399.

¹⁴ Deposition of William Waid, January 16, 2019.

Exhibit 1. FICO's Enterprise Pricing Guidelines¹⁵**7.5 Enterprise / Business Unit Pricing Guidelines**

Enterprise or Business Unit (Division) pricing is a standard way of doing business, but it is impossible to have list prices as appropriate pricing is a function of:

- Probable number of applications that will benefit from our decision-making technology
- Size of applications that will use our decision-making technology
- Rate of technology adoption (eg: 20 applications within 5 years or in 20 years)
- Value of reduction in IT costs
- Value of Business agility and precision gain
- Number of product options being purchased as part of the license (current and future)

Contractual restrictions may be considered that formally restrict the number of applications or CPUs that can be deployed as part of defining the size of the license. The following chart is provided for guidelines only – all ELAs must be priced with the participation and approval of product line management.

Enterprise Size	License Fee	SKU
Small – Up to \$2 bil/yr sales	\$750,000	DDENTSML
Medium – Up to \$4 bil/yr	\$1,200,000	DDENTMED
Large – Up to \$10 bil/yr	\$2,400,000	DDENTLRG
Very Large – Up to \$20 bil/yr	\$4,800,000	DDENTVLRG
Extremely Large – Over \$20 bil/yr	Add \$1 mil per \$10 bil in additional sales/yr	

67. In addition to their pricing guidelines, FICO had standard pricing discounts guidelines for Global Fortune 200 and 2000 class customers.

¹⁵ FICO 0057386 – 57412, at 57406.

Exhibit 2. FICO's Cumulative Net License Purchase Volume Discount Schedule¹⁶*Cumulative Net License Purchase Volume Discount Schedule for Global 200 class customers*

\$0	to	\$249,999	10%
\$250,000	to	\$749,999	20%
\$750,000	to	\$1,499,999	25%
\$1,500,000	to	\$1,999,999	30%
\$2,000,000	to	\$2,499,999	35%
\$2,500,000	to	\$2,999,999	40%
\$3,000,000	to	\$3,999,999	45%
\$4,000,000	and	above	50%

Cumulative Net License Purchase Volume Discount Schedule for Global 2000 class customers

\$0	to	\$249,999	10%
\$250,000	to	\$499,999	15%
\$500,000	to	\$749,999	20%
\$750,000	to	\$999,999	25%
\$1 mil	to	\$1,499,999	30%
\$1,500,000	and	over	40%

68. FICO sold the ELA for approximately \$1.47 million, about one third (1/3) of the price per its own methodology. FICO gave Federal a large discount in the license for Blaze. This pricing by FICO is consistent with industry customs and practices and FICO's own conduct with other licensees, *i.e.*, significantly reducing the license fees charged from its list price. In return the licensor gains additional revenue sources I have outlined above including, for example, maintenance and support revenue streams, an opportunity to sell more services and products in the future, and increased customer loyalty from the licensee. Here, for example, FICO gained

¹⁶ FICO 0057386 – 57412, at 57389.

approximately \$6.6 million in additional revenue related to this license from Federal over the course of their relationship.¹⁷

VII. FICO'S ACTIONS WERE NOT COMMERCIALY REASONABLE

69. FICO's unilateral actions in this matter are not commercially reasonable given industry customs and practices in software licensing. These unilateral actions, which I discuss in more detail below, include, but were not limited to, the following:

- Asserting the license agreement did not allow uses the parties agreed to in 2006, and that the parties acknowledged throughout the licensing relationship prior to the merger in 2016;
- Leveraging the merger in an effort to extract more money from Federal based on a commercially unreasonable interpretation of the Parties' prior agreements;
- Using the manufactured breach as a basis to demand further license fees that ignore the terms of the license agreement, ignore Federal's actual use of Blaze and are not supported by Blaze's actual fair market value; and
- If it is found that Federal needed any form of "consent" following the merger, unreasonably withholding that consent without any evidence or knowledge of expanded use of Blaze following the merger and then attempting to terminate the Agreement.

¹⁷ Deposition of Chris Ivey, Exhibit 380 at FED017887_0037.

A. FICO Asserting the License Agreement Did Not Allow Uses the Parties Agreed to in 2006

70. In its 2016 negotiations with Federal, FICO took the position that it recently discovered uses that breached the License Agreement.¹⁸ FICO then attempted to leverage that alleged breach in its negotiations with Federal.¹⁹

71. FICO's position was not commercially reasonable based on my experience in the industry. First, the License Agreement does not limit use or installation to the United States.²⁰ Rather, it is an enterprise-wide license, without any applicable limitations. Second, FICO's statements and conduct throughout the license relationship shows that FICO believed and treated the License Agreement as allowing enterprise-wide use and installation that was not limited to the United States.²¹

72. FICO's conduct during the negotiations is inconsistent with the License Agreement's terms, as negotiated and agreed to by the parties. Specifically, the Agreement, Section 2 License Grant does not include any language about Federal's use or installation being limited to a specific geographic area.

¹⁸ Deposition of William Waid, January 16, 2019, Exhibit 235.

¹⁹ In fact, there are several examples in evidence that indicate that FICO was well aware of Federal's use indicating that the language of "recently discovered" was false and, thus, provides another example of commercially unreasonable conduct by FICO and its representatives. See, for example, Deposition of Oliver Clark, September 11, 2018, Exhibit 47.

²⁰ Deposition of Chris Ivey, March 14, 2019, Exhibit 60. In my opinion, installation and use are the same with respect to Blaze. One cannot use the Blaze software without installing it. This is consistent with Mr. Carretta's deposition testimony. Deposition of Thomas Carretta, October 9, 2018, p. 103. Therefore, when I refer to "use" in this report I am referring generally to both use and installation.

²¹ *E.g.*, Deposition of Chris Ivey, March 14, 2019, Exhibit 54 (FICO discussing Federal being licensed to use Blaze in Europe); Deposition of Chris Ivey, March 14, 2019, Exhibit 60 (FICO stating Blaze can be used in the United Kingdom); Deposition of Oliver Clark, September 11, 2018, Exhibit 47 (FICO "client partner" stating that Federal has a "global" enterprise license agreement).

73. Mr. Wachs from FICO agreed in his deposition when he testified that he would have expected to see the license grant section reference territory.²²

74. Other license agreements executed between FICO and its licensees also support Mr. Wachs' assumption by referring to territory within their license grant sections.²³

75. It is my opinion, that if the intent of the parties was to limit the territory to a specific area, then I would have expected FICO to follow industry customs and practices by calling out the limitation within the license grant clause. FICO, however, did not do so.

76. Additionally, FICO's conduct during the life of the license shows that FICO believed that the license was a global, enterprise-wide license.

1. The License Agreement is an Enterprise-Wide or Global License without any Geographical Limitations on Use.

77. Judging by industry custom and norms, a party to a software license agreement would not expect that the 2006 ELA that FICO negotiated with Federal was intended to limit the use of Blaze to a specific territory. The following exhibit shows the terms that were defined in the June 2006 Agreement.

²² Deposition of Lawrence Wachs, February 26, 2019, p. 91.

²³ *E.g.*, FICO0009433; FICO0009595; FICO0021384; FICO0041902.

Exhibit 3. “Territory” Defined in June 2006 Agreement

1. Definitions

The following terms, as used in this Agreement with initial capital letters, in the singular or the plural, will have the meanings set forth below. Other terms may be defined in context within this Agreement:

“CPU” means a single core central processing unit. For multi-core central processing units, each core will count as one “CPU”.

“Documentation” means the *Blaze Advisor User Guide* provided in either HTML or PDF format.

“Fair Isaac Products” means the Blaze Advisor products listed in Section 1 of Exhibit A. The Blaze Advisor Development product allows a developer to utilize design and testing tools and to run a non-production deployment environment for testing use only. The Blaze Advisor Deployment product consists of the Blaze Advisor Rule Server and Engine and allows the software to be run on a system handling production-level processing.

“Seat” means an identified individual user on a single personal computer or workstation.

“Territory”, with respect to the installation and physical location of the Fair Isaac Products, means the United States of America.

78. The term “territory” is defined in the section called “Definitions” which according to the Agreement is “as used in this Agreement with initial capital letters, in the singular or the plural, will have the meanings set forth below. Other terms may be defined in context within the Agreement.”

79. While the term “territory” is defined in the June 2006 Agreement at Section 1 – Definitions, it is never used in the Agreements nor any of the amendments. As you can see in the exhibit below, the term “territory” is not used in the License Grant section. This is not consistent with industry customs or practices in the software licensing field.

Exhibit 4. License Grant Section in the June 2006 Agreement**2. License Grant**

2.1 License Grant to Fair Isaac Products. Subject to the terms, conditions and limitations of this Agreement, Fair Isaac hereby grants to Client a perpetual (subject to the provisions of Article 9), non-exclusive, non-transferable, limited license to use the Fair Isaac Products during the Term for its internal business purposes, subject to the additional limitations set forth below and/or listed in Exhibit A.

(a) Seat/CPU License. If the "Scope/Quantity" of the license for any Fair Isaac Product is designated in Exhibit A as limited to a specified number of "Seats" or "CPUs", then Client's use of such Fair Isaac Product shall not exceed the number of Seats or CPUs, as applicable, that are set forth in Exhibit A for such Fair Isaac Product.

(b) Named Application License. If the "Scope/Quantity" of the license for any Fair Isaac Product is designated in Exhibit A as "Named Application", then, subject to any "Seat" or "CPU" limitation that may also apply, Client may use such Fair Isaac Product only in connection with the particular Named Application of Client that is defined in Exhibit A. Under no circumstances may Client use such Fair Isaac Products on a stand-alone basis or in connection with any other application.

(c) Enterprise-Wide License. If the "Scope/Quantity" of the license for any Fair Isaac Product is designated in Exhibit A as "Enterprise-Wide", then Client may use such Fair Isaac Product on an unlimited number of Seats or CPUs, as applicable; provided, however, that such use is for Client's use only and not for use by any of Client's affiliated, subsidiary, or parent companies.

80. FICO's own internal presales report referred to the license as a global ELA. The exhibit below shows the internal report referring to the ELA as being global.

Exhibit 5. FICO's Internal Report²⁴

Chubb Global ELA		SOL#	
Exp. Value: 1.2MM	Create Dt: 10/12/06		
Exp. Close Dt: 12/31/06	Impending Event (why close on this date?): Pushing into this quarter is aggressive but possible because Chubb has 2006 dollars to spend. Also Chubb has identified several new applications that could utilize a rules engine.		
AE: Larry Wachs	SE: Dale Zwizinski	PS:	CP: Russ Schreiber
Product(s): Blaze Advisor			
Other FIC Product(s) and applicable AE(s):			
Competition: none			

Work Items

Work Sheet (Y/N)

Evaluation Date Issued:	Expiry Date: Nov 2006	Y
RFI/P Date Issued:	Submitted Date:	N
Custom Demo Start Date:	Presentation Date:	N

Opportunity Specifics (Bulleted Lists)

Specific BUSINESS Need for a Rule Engine (What job(s) need to be accomplished with rules):
•
What are the BUSINESS drivers for selection (Key business reasons for choosing a product):
•
TECHNICAL Stack (language, app server, db, middleware, other important software):
•
Specific FIC Features (what specific BUSINESS and TECHNICAL features will make us win):
•

Current Status

Last Updt Dt: 11/30/06	Current Status: Pricing sent to Chubb of 1.5 million for Global ela (Blaze Advisor)
Next Step: Get feedback/negotiate the ELA	
Immediate Concerns (Roadblocks, events, etc.) and Workarounds:	

Activities: (Proof steps, visits, important phone calls, architectural sessions, etc)

Date	Activity	Notes
10/12/06	Background	Chubb Commercial Insurance (CCI) is interested in having an onsite presentation of Blaze Advisor (and also hear about the EDM story). One of the commercial architects went to Blaze Training at Chubb Specialty Insurance (CSI). There are several projects that have been discussed but at this time none have approved budget. Larry, Russ, Mike Gordon, and I are having an on-site meeting with approximately 30 attendees. This is a great opportunity to meet with the commercial side of the business and try to get closer to an ELA for 2007.
11/30/06	Moving towards a global ELA	Larry has been working with Chubb to get an ELA through this year. The total (after credit) for a global ELA (including COBOL and SmartForms) was priced out at 1.5MM. I need to get an update on Chubbs response to the proposal. Pushing into this quarter is aggressive but possible because Chubb has 2006 dollars to spend. Also Chubb

²⁴ Deposition of M. William Paul Waid, January 16, 2019, Exhibit 111.

2. In 2016, FICO changed its position regarding the territory covered by the license.

81. My review of discovery material found multiple examples of FICO referring to the June 2006 Agreement as a global agreement. It appears that FICO only started referring to the License Agreement as being limited to the United States when it learned about the merger discussions in 2016.

82. For example, in the email below dated March 2015 FICO employees state they are aware of “no restrictions” in the Blaze license for Europe.

Exhibit 6. Examples of FICO Employees Confirming June 2006 Agreement is Global²⁵

Message

From: Oliver Clark [OliverClark@fico.com]
Sent: 3/11/2015 10:22:44 AM
To: Mike Sawyer [MikeSawyer@fico.com]; James Chaban [jchaban@fico.com]
Subject: RE: Chubb

Hi Mike,

It looks like Chubb Europe are looking into this (use as a ratings engine). I know of no restrictions in the licence that prevent them from doing so?

Regards,

Olly

83. In April 2015, Mr. Moffat, FICO’s Senior Executive states that “No additional Blaze license(s) are needed as it is covered within the overall global Blaze ELA.”

²⁵ Deposition of Chris Ivey, March 14, 2019, Exhibit 54.

Exhibit 7. Examples of Plaintiff's Employees Confirming June 2006 Agreement is Global²⁶

From: Andy Moffat
Sent: 01 April 2015 11:07
To: htonkin@chubb.com
Cc: davidgibbs@chubb.com; Mark Collingwood; Oliver Clark; Larry Jacobson
Subject: Decision Simulator Proposal
Importance: High

Hi Hamish,

Please see the attached proposal for the licensing costs and associated training for Decision Simulator. The prices are heavily discounted in line with the existing Blaze contract. No additional Blaze license(s) are needed as it is covered within the overall global Blaze ELA.

Happy to talk through / organise a call if needed?

Kind regards

Andy

Andy Moffat
Senior Account Executive

FICO

84. Another example is Mr. Sawyer, FICO's "Client Partner" to the licensee confirming in 2012 that the June 2006 ELA is a global license.

²⁶ Deposition of Chris Ivey, March 14, 2019, p. 60.

Exhibit 8. Examples of Plaintiff's Employees Confirming June 2006 Agreement is Global²⁷

----- Original Message -----
 From: Sawyer, Michael L (Mike)
 Sent: Tuesday, August 14, 2012 01:54 PM
 To: Hill, Richard
 Cc: Schreiber, Russell (Russ)
 Subject: RE: Chubb (again)

Richard -

I am the CP for Chubb. They do have a Global ELA for Blaze and have an automated UW Application running in the UK already. As Russ pointed out, our upside is around Model Central, Decision Simulator and PS and we are doing a MC POC for them right now. Blaze Advisor is the standard for rule deployments at Chubb and their enterprise architect has mandated that any project that requires a rule engine will use Blaze. Henry Mirolyuz is the technical resource at Chubb responsible for Blaze and pretty much all projects run through him.

Let me know how I can help.

Mike Sawyer
 Client Partner - Insurance & Healthcare

FICO



85. My review of the depositions and other discovery material did not find any explanation for why before the merger announcement there are multiple examples of the license agreement being referred to as global and none that say it was limited to the United States.

86. See, for the example, the deposition of Mr. Clark, FICO's Director of Pre-Sales Consulting.²⁸

A Yes, information was received saying that this was a global license from both the client and from FICO.

BY MS JANUS:

Q First from FICO; correct?

A Yes. Yes.

87. It is my opinion that FICO's accusations of breaches of the agreement that contradicted the License Agreement's terms and the parties' performance under the License Agreement, were not commercially reasonable.

²⁷ Deposition of Oliver Clark, September 11, 2018, Exhibit 47.

²⁸ Deposition of Oliver Clark, September 11, 2018, p. 185.

88. For years, FICO consented to and allowed Federal to use and install Blaze outside of the United States. For FICO to suddenly take a contrary position during post-merger negotiations was not commercially reasonable or consistent with good faith conduct in the industry.

89. Assuming that the License Agreement is determined to allow global use and installation, and/or that FICO's previous acquiescence to such use waived any claim that the use is not allowed, it is my opinion that FICO's accusations of the breach based on use outside of the United States, were not commercially reasonable. Rather, FICO's actions were a bad faith attempt to force Federal into an unfavorable new license deal.

B. FICO Withheld Consent and Inappropriately Terminated the Agreement

1. Withholding Consent

90. FICO used the "No Assignment" clause in the software license agreement to demand additional license fees from Federal in a commercially unreasonable manner. FICO knew that its licensees would not have sufficient time to remove FICO's software from their applications from the time the merger is announced to when it is completed. The licensees would have to acquire software to replace Blaze and do technical work that includes migrating their configuration (*e.g.* rules) and integrating it with their application. Finally, they would have to then test, document, and rollout the updated application.

91. Parties to a software license agreement would not expect to be confronted with such an unreasonable demand given the above-mentioned value to software licensors like FICO from continuing a licensing relationship.

92. The June 2006 "No Assignment" clause in Section 10.8 states that:

- a. Neither party shall, without the prior written consent of the other party, assign or transfer this Agreement, or any part thereof. In the event of a change of control of Client, or if Client is merged with, acquired by or acquires another entity, or undergoes a reorganization or otherwise acquires the right to process the business of another entity, each such event shall be deemed to be an assignment subject to this section, and Client shall make **no expanded use** of the Fair Isaac Products as a result of any such event unless and until Fair Isaac provides such written consent, **which will not be unreasonably withheld**. Any attempt to assign or transfer all or any part of this Agreement without first obtaining such written consent will be void and of no force or effect.

93. FICO's Mr. Sawyer testified at his deposition that he did not know of any expanded use by Federal after the merger.²⁹

A. For clarity, after the merger, I had no evidence supplied to me that would indicate that Federal used the product in an expanded way.

94. Hence, even if Federal were required to obtain consent pursuant to this clause, FICO's unilateral actions based on the argument of expanded use are not commercially reasonable.

2. Inappropriate Termination

95. Turning to FICO's unilateral actions in withholding consent and attempting to terminate the Agreement, these actions were also not commercially reasonable given how Blaze was integrated into Federal's operations. When FICO made the argument that it would terminate the Agreement, it, as I note above, was likely well aware that it would not be possible for Federal to cease using Blaze immediately upon their demand.

96. I note, moreover, that if FICO believed consent was needed, it had other readily available options such as simply granting an assignment that limited the use of Blaze to no more than what Federal had used prior to the merger.

²⁹ Deposition of Michael Sawyer, October 2, 2018, p. 135.

97. FICO was aware that during mergers notifying software vendors is not a high priority. In fact, Ms. Boone of FICO in her deposition discussed the processes that occur during M&A; she described how the commercial attorney's job is to get consent for assignment after M&A finishes getting the deal closed.³⁰

A. Well, from a commercial attorney perspective, when you have an M&A deal, whenever you're looking at material contracts as part of the due diligence, most of them have some kind of assignment provision, sometimes they require consent, sometimes they don't. But the M&A attorneys really don't ever let consent get in the way of the deal closing, so they don't wait around for prior written consent of the other parties who are in contracts with the entity that's being acquired or that's merging.

So once the deal closes, it's kind of the commercial attorney's jobs usually, at least in my experience, to clean up all of this consent that -- all the consents that are required for assignment. So while that's happening, there's a negotiation going on with the other parties to the contracts that are requiring consent, and while that's happening the client is allowed to continue to use the software, in this instance, within the scope of its license. But if no resolution happens and no consent is given, then the Agreement terminates.

98. As Ms. Boone testified, parties to a software license agreement do not expect that they will be confronted with unreasonable demands during this "clean up" process, which also shows that FICO's actions in refusing consent without justification were not commercially reasonable.

C. FICO's Demands for More License Fees Ignores Federal's Actual Use of Blaze

99. My research found that FICO and FICO's expert, Mr. Neil Zoltowski, ignored the actual use of Blaze by Federal when calculating the alleged damages.

100. I have used the report from Mr. Zoltowski, FICO's damages expert, in my analysis regarding these actions by FICO. Mr. Zoltowski's report contains false assumptions and errors regarding the actual use of Blaze by Federal. These errors fall into seven-related categories:

³⁰ Deposition of Jandeen Boone, February 6, 2019, p. 42.

- FICO Incorrectly Assumes That Several Federal Applications Use Blaze
- FICO Ignores the 2006 ELA That Granted Federal Rights to Use Blaze in International Applications
- FICO Incorrectly Applies Its Own Sizing Methodology
- FICO Incorrectly Assumes Expanded Use of Blaze
- FICO Incorrectly Assumes that Federal Would Not Purchase Enterprise Licenses
- FICO's Use of Named Applications Has No Relationship with Licensing Attributes and the Merger
- FICO Ignores Its Own Standard Price Discounts

101. I discuss each of these incorrect assumptions and errors below in more detail by drawing from Mr. Zoltowski's work. The exhibit below shows Table 3 from his report. The table shows all of the applications and the years that he believes damages occurred.

Exhibit 9. Zoltowski Summary of Applications & Damages Years³¹

Table 3: Summary of Applications & Damages Years

Application	Country	Start	End
ADAPT	Australia	2010	2019
ADAPT	U.K.		
EZER	U.K./ Europe	2012	
Evolution	Canada	2013	
Broker Site	Canada		
Evolution	Australia	2017	
Exari	U.K.	2013	2016
CSI eXPRESS	U.S.	2016	2019
Automated Renewal			
Profitability Indicator			
Decision Point			
Premium Booking			
Cornerstone			
CUW			
IRMA			
TAPS			
CIS Claims			

³¹ Zoltowski Report, p. 28.

1. FICO's Expert Incorrectly Assumes That Several Federal Applications Use Blaze

102. Mr. Zoltowski mistakenly assumes that the Federal applications listed above use the FICO software. The exhibit below shows the 6 applications in his report that do not use Blaze:

Exhibit 10. Federal Applications that FICO Incorrectly Assumes Uses Blaze

Application
ADAPT – U.K.
CIS Claims
Cornerstone
EVOLUTION – Australia ³²
Exari – U.K. ³³
Broker Site - Canada ³⁴

103. The CIS Claims application is a claims system and not a policy system. According to Federal's Mr. Harkin, Federal did not use Blaze for claims applications.³⁵

104. Cornerstone³⁶ also does not use Blaze because it predates Blaze and runs on a mainframe.³⁷

Q. And what is the factual basis for that position?

A.I had a conversation with Ramesh, who asserted that and explained that the Cornerstone application is a mainframe application built in the 1970s and predated the use of the Blaze Advisor software.

³² Evolution –Australia does not use Blaze, See Deposition of Kevin Harkin, March 25, 2019, Exhibit 408.

³³ Exari does not use Blaze, See Deposition of Kevin Harkin, March 25, 2019, p. 32 and Exhibit 410.

³⁴ Deposition of Kevin Harkin, March 25, 2019, Exhibit 408.

³⁵ Deposition of Kevin Harkin, March 25, 2019, pp. 93-95 and Exhibit 408

³⁶ Deposition of Kevin Harkin, March 25, 2019, Exhibit 408

³⁷ Deposition of Kevin Harkin, March 25, 2019, p. 96.

3. FICO's Expert Ignores the License Agreement That Grants Federal Rights to Use Blaze in International Applications

105. Mr. Zoltowski's assumption that the applications used by Federal outside the United States are not licensed is incorrect. I have addressed the fact that the 2006 ELA is a global ELA earlier in this report. Thus, FICO is unjustified in asking for additional fees for uses the parties acknowledged were licensed throughout their relationship prior to the merger in 2016.

4. FICO Incorrectly Applies Its Own Sizing Methodology

106. The exhibit below from Mr. Zoltowski's report shows how much he calculated in lost fees per domestic application that used Blaze.

Exhibit 11. Zoltowski Summary of Lost Fees for Applications Used in United States³⁸

Fair Isaac Corporation v. Federal Insurance Company and ACE American Insurance Company

SCHEDULE 4.0: Summary of Lost Fees for Domestic Applications

Domestic Application	License, Support, and Maintenance (a)	Damages Period			Total Lost Fees
		Start Date (b)	End Date (c)	Years	
CSI eXPRESS	\$ 634,095	3/31/2016	12/9/2019	3.7	\$ 2,341,942
Automated Renewals Process (ARP)	480,375	3/31/2016	12/9/2019	3.7	1,774,198
Profitability Indicator	440,573	3/31/2016	12/9/2019	3.7	1,627,193
Decision Point	549,000	3/31/2016	12/9/2019	3.7	2,027,655
Commercial Underwriting Workstation (CUW)	823,500	3/31/2016	12/9/2019	3.7	3,041,483
Premium Booking	260,775	3/31/2016	12/9/2019	3.7	963,136
Texas Accident Prevention System (TAPS)	138,623	3/31/2016	12/9/2019	3.7	511,983
Individual Rate Modification Application (IRMA)	220,973	3/31/2016	12/9/2019	3.7	816,131
CIS Claims	590,175	3/31/2016	12/9/2019	3.7	2,179,729
Cornerstone	220,973	3/31/2016	12/9/2019	3.7	816,131
Total	\$ 4,359,060				\$ 16,099,581

³⁸ Zoltowski Report, p. 47.

*Fair Isaac Corporation v. Federal Insurance Company and ACE American Insurance Company***SCHEDULE 6.0: Domestic Named Application Annual Fees**

Domestic Application (a)	Perpetual License (a)	Annual License (b)	Support and Maintenance (c)	License, Support, and Maintenance (d)
CSI eXPRESS	\$ 1,155,000	\$ 519,750	\$ 114,345	\$ 634,095
Automated Renewals Process (ARP)	875,000	393,750	86,625	480,375
Profitability Indicator	802,500	361,125	79,448	440,573
Decision Point	1,000,000	450,000	99,000	549,000
Commercial Underwriting Workstation (CUW)	1,500,000	675,000	148,500	823,500
Premium Booking	475,000	213,750	47,025	260,775
Texas Accident Prevention System (TAPS)	252,500	113,625	24,998	138,623
Individual Rate Modification Application (IRMA)	402,500	181,125	39,848	220,973
CIS Claims	1,075,000	483,750	106,425	590,175
Cornerstone	402,500	181,125	39,848	220,973
Total	\$ 7,940,000	\$ 3,573,000	\$ 786,060	\$ 4,359,060

107. His pricing estimates for each of these domestic applications are inflated and the sizing of these licenses is inconsistent with FICO's own sizing methodology.³⁹

108. FICO's 2003 Global Price List for Named Applications in the exhibit below shows that the cost for a small project is \$200,000 list price.

Exhibit 12. Named License Fees from 2003 FICO Global Price List⁴⁰

7.4 Named Application or Business Function Pricing for Deployment

Business Function pricing scopes the use of the deployment licenses to a single named project or business process within a specified business unit. It is the only way we sell Blaze Decision System and should be used instead of per-CPU pricing for Blaze Advisor wherever possible. These licenses are priced based on size of application and size of company, and based on whether either or both of our commonly needed "high value" options are needed – Scorecards with Reason Codes and Code Generation for high performance execution (C, Cobol or Java for BDS and Java for BA).

Product	Project Size	License Fee	SKU
Blaze Advisor without Scorecards or High Performance Code Generation	Small	\$200,000	BAPRJSML
	Medium	\$350,000	BAPRJMED
	Large	\$500,000	BAPRJLRG
	Very Large	\$1,000,000	BAPRJVLRG
Blaze Decision System or Blaze Advisor with Scorecards and/or High Performance Code Generation	Small	\$300,000	DDPRJSML
	Medium	\$525,000	DDPRJMED
	Large	\$750,000	DDPRJLRG
	Very Large	\$1,500,000	DDPRJVLRG

³⁹ It appears that Mr. Zoltowski apparently relied on FICO providing size estimates vs. doing any independent analysis of how Blaze should be priced based on FICO's own methodology in the 2003 Global Price List.

⁴⁰ FICO 0057386 – 57412, at 57406.

109. When Federal purchased Blaze for the CSI application in the June 2006 for \$173,350, FICO categorized the application as small:

Exhibit 13. FICO Internal Email on CSI Application Being Categorized as Small⁴¹

John

I've brought down the enterprise (Divisional) license to \$840,000 based upon the Division's sales of \$3.5 billion (confirmed on their annual report).

I've qualified the license as ".Net" or "Java" and that it pertains only to CSI Policy Renewal application and that it qualifies as a 'small' application at \$200,000.

Let me know if it needs further tooling.

Thanks

Larry

110. Mr. Zoltowski has sized the same application to be “large” as shown in the exhibit below. This inflated the damage estimates by having a price that is six times (6x) more than what FICO originally charged Federal.⁴²

Exhibit 14. Zoltowski Report, Schedule 6.1

SCHEDULE 6.1: Domestic Application Perpetual License Fee Calculation

Domestic Application (a)	Size (b)	Deployment License (c)	Multi-Platform Uplift (d)	Fees			
				Adjusted Deployment License (e)	Development Seat Pack (b)	License (f)	Perpetual License (g)
CSI eXPRESS	Large	\$ 750,000	40%	\$ 1,050,000	2 x 3 (d)	\$ 105,000	\$ 1,155,000
Automated Renewals Process (ARP)	Large	750,000	n/a	750,000	10	125,000	875,000
Profitability Indicator	Large	750,000	n/a	750,000	3	52,500	802,500
Decision Point	Large	750,000	n/a	750,000	2 x 10	250,000	1,000,000
Commercial Underwriting Workstation (CUW)	Very Large	1,000,000	n/a	1,000,000	2 x 30	500,000	1,500,000
Premium Booking	Medium	350,000	n/a	350,000	10	125,000	475,000
Texas Accident Prevention System (TAPS)	Small	200,000	n/a	200,000	3	52,500	252,500
Individual Rate Modification Application (IRMA)	Medium	350,000	n/a	350,000	3	52,500	402,500
CIS Claims	Very Large	1,000,000	n/a	1,000,000	5	75,000	1,075,000
Cornerstone	Medium	350,000	n/a	350,000	3	52,500	402,500
Total		\$ 6,250,000		\$ 6,550,000		\$ 1,390,000	\$ 7,940,000

⁴¹ Deposition of William Waid, January 16, 2019, Exhibit 106.

⁴² It is my understanding that the characteristics of the application have not changed since it was originally quoted by FICO. It is also my understanding from the deposition of Mr. Waid that FICO's 2003 Global Price List is still used today. See Deposition of William Waid, January 16, 2019, pp. 98-99.

111. FICO has a nine-factor, application-sizing grid, as shown in the exhibit below.⁴³

Exhibit 15. FICO's Nine-Factor, Application-Sizing Grid

Application sizing matrix

Criteria	Application Size Category			Very Large
	Small	Medium	Large	
Reach:				
Must meet minimum criteria noted in each column	Pilot Application	Business function application	Divisional level application	Cross-enterprise application
	Or	Single detached application		
Rule transactions anticipated:	And			
For online applications:				
Peak Rule transactions per day are less than	2,000	35,000	600,000	5,000,000
Peak Number of End Application Users per day are less than	And: 50	200 *if known	500 *if known	Unlimited
For batch applications:	And/Or			
Number of records is less than	100,000	800,000	5,000,000	30,000,000
Batch window processing requirements is not less than	And: 15 minutes	1 hour	2.5 hours	6 hours
Rule count is less than:	And	500	1500	7,500
				Unlimited
Number of Production Deployment CPUs is less than:	And	2	6	16
				48
Number of rule authors is less than:	And	5	10	25
				Unlimited
		Exclusions:	Exclusions:	Exclusions:
		Platform is not mainframe or mid-range (OS390, AS400, Himalya/Tandem Non-Stop)	N/A	N/A
			N/A	N/A

112. Mr. Waid stated that the most critical factor is the number of transactions.⁴⁴

113. The following exhibit is in response to “REQUEST NO. 89: Specific to each application that uses or used Blaze Advisor® software, this document shows: (a) the number of business rules in each application; (b) the type of business rules in each application, including, without limitation, underwriting, pricing, claims, renewal processing, and workflow; and (c) the number of daily and monthly batch and real-time business rule transactions for each application.”⁴⁵

⁴³ Deposition of William Waid, January 16, 2019, pp. 14-15.

⁴⁴ Deposition of William Waid, January 16, 2019, Exhibit 82.

⁴⁵ There are other interrogatory responses from Federal that provide information regarding use of Blaze at Federal. See, Interrogatory response 19, dated February 28, 2019; Interrogatory response 20, dated February 28, 2019; Interrogatory response 6, dated March 21, 2019; and Interrogatory response 16 and 17, dated March 21, 2019.

Exhibit 16. Federal's Response to FICO Discovery Request #89

Application	Blaze Rule Capability	Complexity / # of rules	Real-time transactions		Batch Transactions - Run Frequency
			Average # per month	Average # per Day	
CSI Express	Predictive Modeling - policy scoring	High 8300	750,000 - 1,000,000	45,500	On average – twice per week
	Underwriting guidance	High 12800	Service is disabled		
Decision Point	Rate tables and Pricing Calculations	High 2250	10000	455	N/A
	Eligibility determination		50000	2,300	
	Endorsement generation		30000	1,400	
	Data Normalization		50000	2,300	
Automated Renewal Process	ARP1 - renewal categorization	High 3410	N/A	N/A	Monthly
	ARP2 - Policy renewal automation, including endorsement generation				Daily
CUW	Inventory Management & Workflow routing, assignments, scoring	Medium	1.22 million per month	55,000	Nightly
		1502		2,000	
IRMA (Individual Rate Modification Application)	Rate tables and Pricing Calculations	Medium 622	184,072	8,350	
TAPS (Texas Accident Prevention System)	Accident Prevention Compliance	Low 76	N/A	N/A	Monthly
Premium Booking	Validation Rules for PARS	High 3120	N/A	N/A	Daily
Evolution	Underwriting guidance for Canada	Medium 350	N/A	N/A	Daily-Once
Adapt-ABL	Underwriting guidance for EUZ and Australia	Medium 1720	N/A	N/A	Daily-Twice
EZER (Comm'l PAS in EUZ)	Renewal Policy categorization	Medium 910	N/A	N/A	Daily-Once

114. The CSI eXPRESS application shown in the exhibit above has the second largest number of average monthly transactions and the most complex number of rules of the ten Federal applications included in Discovery Request #89. If CSI eXPRESS was a small app according to FICO when they originally licensed Blaze for it, then using it as proxy for the other Federal apps, I can estimate their sizes. Each of the Federal apps were significantly smaller than CSI except for CUW.

115. It is my opinion based on my review of the discovery materials that the following applications should be sized as shown in the exhibit below to stay consistent with how FICO had sized CSI prior to this dispute.

Exhibit 17. Sizing of Federal Applications Using FICO's Methodology Compared with Alleged Damages

Application	Zoltowski Report Sizing	Kursh Sizing
CSI eXPRESS	Large	Small

Automated Renewals Process	Large	Small
Profitability Indicator	Large	Small
Decision Point	Large	Small
Commercial Underwriting Workstation	Very Large	Medium ⁴⁶
Premium Booking	Medium	Small
Texas Accident Prevention System	Small	Small
Individual Rate Modification Application	Medium	Small
CIS Claims	Very Large	Does Not Use Blaze
Cornerstone	Medium	Does Not Use Blaze

116. Another example of FICO incorrectly applying its own sizing methodology is the inconsistency between its Interrogatory responses and what is now claimed as damages in Mr. Zoltowski's report. The following exhibit shows FICO's Second Supplemental Answers to Defendant's Interrogatory Nos. 6-9.

Exhibit 18. FICO's Interrogatory Response Regarding Sizing of Federal's Applications Compared with FICO's Alleged Damages

Application	Zoltowski Report Sizing	Interrogatory⁴⁷
CSI eXPRESS	Large	Medium
Automated Renewals Process	Large	Very Large
Profitability Indicator	Large	
Decision Point	Large	Very Large
Commercial Underwriting Workstation	Very Large	Medium
Premium Booking	Medium	Very Large

⁴⁶ I have conservatively assumed CUW is one size larger than CSI even though they are relatively similar in number of transactions.

⁴⁷ Plaintiff Fair Issac Corporation's Second Supplemental Answers to Defendant's Interrogatory Nos. 6-9, April 23, 2018.

Texas Accident Prevention System	Small	Medium
Individual Rate Modification Application	Medium	Medium
CIS Claims	Very Large	Very Large
Cornerstone	Medium	Medium

117. CSI eXPRESS was “Small” when FICO sold the deal; it was “Medium” when they submitted the Interrogatory responses referenced above and in Mr. Waid’s deposition⁴⁸; and then it was “Large” when their expert, Mr. Zoltowski, calculated damages.

118. I have not seen evidence that shows a methodology by FICO that can be reproduced to size licenses consistently. Instead, FICO is using what appears to be an unsupported methodology that allows it to claim the highest fee possible is its “standard” price based on the circumstances.

119. Turning to lost fees for applications used internationally, I found similar issues.

⁴⁸ Deposition of William Waid, January 16, 2019, pp. 108 – 117.

Exhibit 19. Zoltowski Summary of Lost Fees for International Applications⁴⁹*Fair Isaac Corporation v. Federal Insurance Company and ACE American Insurance Company***SCHEDULE 5.0: Summary of Lost Fees for Foreign Applications**

Foreign Application	Region	License, Support, and Maintenance (a)	Damages Period		Years	Total Lost Fees
			Start Date	End Date (b)		
ADAPT	Australia	\$ 452,925	4/21/2010 (c)	12/9/2019	9.6	\$ 4,364,945
ADAPT	U.K.	452,925	4/21/2010 (d)	12/9/2019	9.6	4,364,945
Evolution	Australia	440,573	2017 (c)	12/9/2019	2.9	1,294,276
Evolution	Canada	634,095	9/6/2013 (e)	12/9/2019	6.3	3,968,627
EZER	U.K. and Europe	440,573	2012 (c)	12/9/2019	7.9	3,498,043
Exari	U.K.	440,573	10/9/2013 (f)	1/27/2016 (f)	2.3	1,014,433
Broker Site	Canada	440,573	9/6/2013 (e)	12/9/2019	6.3	2,757,423
Total		\$ 3,302,235				\$ 21,262,691

*Fair Isaac Corporation v. Federal Insurance Company and ACE American Insurance Company***SCHEDULE 7.0: Foreign Named Application Annual Fees**

Application (a)	Region (a)	License, Support, and Maintenance			
		Perpetual License (a)	Annual License (b)	Support and Maintenance (c)	Support, and Maintenance (d)
ADAPT	Australia	\$ 825,000	\$ 371,250	\$ 81,675	\$ 452,925
ADAPT	U.K.	825,000	371,250	81,675	452,925
Evolution	Australia	802,500	361,125	79,448	440,573
Evolution	Canada	1,155,000	519,750	114,345	634,095
EZER	U.K. and Europe	802,500	361,125	79,448	440,573
Exari	U.K.	802,500	361,125	79,448	440,573
Broker Site	Canada	802,500	361,125	79,448	440,573
Total		\$ 6,015,000	\$ 2,706,750	\$ 595,485	\$ 3,302,235

120. Mr. Zoltowski incorrectly sized the international applications in a similar way to how he had done so with the domestic applications.

⁴⁹ Zoltowski Report, p. 47.

Exhibit 20. Zoltowski Report, Schedule 7.1**SCHEDULE 7.1: Foreign Application Perpetual License Fee Calculation**

<i>Fees</i>								
Application (a)	Region (a)	Size (b)	Deployment License (c)	Multi-Platform Uplift (d)	Adjusted Deployment License (e)	Development Seat		Perpetual License (g)
						Pack (b)	License (f)	
ADAPT	Australia	Large	\$ 750,000	n/a	\$ 750,000	5	\$ 75,000	\$ 825,000
ADAPT	U.K.	Large	750,000	n/a	750,000	5	75,000	825,000
Evolution	Australia	Large	750,000	n/a	750,000	3	52,500	802,500
Evolution	Canada	Large	750,000	40%	1,050,000	2 x 3 (d)	105,000	1,155,000
EZER	U.K. and Europe	Large	750,000	n/a	750,000	3	52,500	802,500
Exari	U.K.	Large	750,000	n/a	750,000	3	52,500	802,500
Broker Site	Canada	Large	750,000	n/a	750,000	3	52,500	802,500
Total			\$ 5,250,000		\$ 5,550,000		\$ 465,000	\$ 6,015,000

121. For example, the EZER application in combination with Blaze from 2012 to 2018 was used on a total of four policies valued at ~\$15k. Yet Mr. Zoltowski sized EZER as large. The exhibit below shows usage of EZER with Blaze:

Exhibit 21. Number of Policies EZER Used with Blaze⁵⁰

Year/Writing Company	Policy Count	Gross Written Premium
2012		
Federal Insurance Company, UK (UK Federal)	0	\$0.00
2013		
UK Federal	0	\$0.00
2014		
UK Federal	2	\$7,832.57
2015		
UK Federal	1	\$3,514.74
2016		
UK Federal	1	\$4,130.00
2017		
UK Federal	0	\$0.00
2018		
UK Federal	0	\$0.00

⁵⁰ Deposition of Kevin Harkin, March 25, 2019, Exhibit 410.

122. It is my opinion that the following international applications should be sized as follows to stay consistent with how FICO sized CSI:

Exhibit 22. Sizing of Federal International Applications Using FICO's Methodology Compared with Alleged Damages

Application		Zoltowski Report Sizing	Kursh Sizing
ADAPT – Australia		Large	Small
ADAPT – U.K.		Large	Does Not Use Blaze
EVOLUTION – Australia		Large	Does Not Use Blaze
EVOLUTION – Canada		Large	Small
EZER – U.K. and Europe		Large	Small
Exari – U.K.		Large	Does Not Use Blaze
Broker Site - Canada		Large	Does Not Use Blaze

123. FICO's argument that their Blaze technology would be used more by Federal due to the merger is proven wrong by looking at the volume of business that passes through the Federal international applications. For example, ADAPT in Australia went from \$26 million in premium volume in 2014 to just \$4 million in 2018.⁵¹

124. The numerous inconsistencies in FICO and Mr. Zoltowski's assertions regarding the sizing of Federal's software applications shows that they are not using commercially reasonable methods to arrive at their sizing conclusions, such as the prior agreement between FICO and Federal for Blaze.

⁵¹ Deposition of Kevin Harkin, March 25, 2019, Exhibit 415.

5. FICO Incorrectly Assumes that Federal Would Not Purchase Enterprise Licenses

125. Mr. Zoltowski fails to consider that Federal would have negotiated with FICO to purchase divisional enterprise licenses for Blaze instead of purchasing licenses on an application-by-application basis. This assumption effectively artificially inflated Zoltowski's damages figures.
126. Most enterprises would typically purchase enterprise-level licenses in this situation. An enterprise-level license provides several advantages to both licensors and licensees, including, but not limited to, lower ongoing administrative costs (*e.g.*, true-ups), average lower license fees per user, and flexibility within organizations regarding allocation of software-usage rights.⁵²
127. Indeed, FICO's calculations regarding additional licenses by named application versus enterprise level further ignores its prior licensing practices with Federal and its other customers.⁵³ As shown below, Mr. Zoltowski in his report summarizes the applications by Federal's domestic business units/segments but ignores the implications of the way in which he has summarized the applications in calculating license fees on an application by application basis.

⁵² I note, however, that in some circumstances, particularly when a software program is to be only by a specific group, type of analysis, or other smaller entity within an organization that licensees purchase licenses that are not enterprise level. For example, software used for analyzing laboratory results would be licensed by a life sciences company just for use by people in their labs. Given that Blaze was not used in many of Federal's applications it is possible that Federal could have licensed just usage rights for the applications. Under that assumption, however, FICO mistakenly assumes that a higher number of Federal applications would need to license Blaze. This assumption is incorrect given the facts in evidence.

⁵³ FICO has signed other enterprise license agreements with companies in recent years: FICO0007374 (Citibank), FICO0009432 (Home Credit Int'l), FICO0009594 (Direct Axis SA (PTY) Limited).

128. Exhibit 23. Zoltowski Summary of Domestic Business Units/Segments and Blaze Advisor Applications⁵⁴

Table 8: Summary of Domestic Business Units/Segments and Blaze Advisor Applications^{23d}

Business Unit/Segment ²³⁵	Blaze Advisor Application
Chubb Specialty Insurance/ Financial Lines	CSI eXPRESS
	CIS Claims
	Decision Point
	Profitability Indicator
	Automated Renewal Process
Chubb Commercial Insurance	CUW
	Individual Rate Modification Application (IRMA)
	Texas Accident Prevention System (TAPS)
Surety	Cornerstone
Commercial Business Systems	Premium Booking

129. FICO sold a divisional enterprise license for the Specialty Insurance Lines at a price of \$350,000.⁵⁵ This division shown in the exhibit above has five applications that use Blaze: CSI eXPRESS, CIS Claims, Decision Point, Profitability Indicator and Automated Renewal Process/

130. Mr. Zoltowski alleged damages for the five applications in Specialty Insurance Lines is a total of \$4,907,500:

- CSI eXPRESS - \$1.155 million
- CIS Claims - \$1.075 million
- Decision Point – \$1 million
- Profitability Indicator - \$802,500
- Automated Renewal Process - \$875,000

⁵⁴ Zoltowski Report, p. 47.

⁵⁵ Amendment One of the June 2006 Agreement.

131. This damages estimate of \$4,907,500 is logically inconsistent with 2006 licensing sale for the same product to the same division for \$350,000, or about 1/14 of what FICO is now alleging as damages. I found no evidence in the discovery materials to justify this increase in the license fees.

6. The Use of Named Applications in FICO's Damages Model Has No Relationship with Licensing Attributes and the Merger

132. FICO has argued that the merger has increased the value of their software for Federal but fails to provide evidence supporting the assumption that the merger changed Federal's use based on the attributes in the FICO sizing grid.

133. In fact, based on the materials I've reviewed it appears that none of the nine factors in the FICO applications sizing grid were impacted materially as a consequence of the merger.

7. FICO Ignores Its Own Standard Price Discounts

134. It is an industry custom and practice to provide price discounts to licensees, particularly if discounts have been provided in the past. Mr. Zoltowski has ignored FICO's standard cumulative pricing discounts which are shown in the 2003 Global Price List:

Exhibit 24. Discounting in FICO's Global Price List⁵⁶

2.2.1 Standard Order Volume Discount Schedule

When calculating an order volume discount, Starter Kits are, by definition, ineligible. Development Seat Packs are eligible: Take gross, list prices and apply the discount in this table.

Total One-Time Perpetual License Fees in a Single Order @ List	Discount
\$0 - \$100,000	0%
\$100,000 - \$200,000	5%
\$200,000 - \$300,000	10%
\$301,000 - \$500,000	15%
\$501,000 - \$750,000	20%
\$751,000 - \$1,000,000	25%
\$1,000,000 - \$2,000,000	30%
Greater than \$2,000,000	40%

⁵⁶ FICO 0057386 – 57412, at 57388 and 57389.

2.2.2 Standard Cumulative Net License Purchase Volume Discount Schedules

Some of our customers will place an initial order or two with the appropriate order volume discount and the simple expectation that they may move towards an Enterprise License Agreement in the future. Other customers will prefer to include a Cumulative Net License Purchase Volume Discount Schedule in their Master Agreement so that they will earn progressively larger discounts as their purchases accumulate over time. These customers simply prefer this mechanism to an Enterprise License Agreement. To support this, we have two Cumulative Net License Volume Purchase Discount Schedules as very large Global 200 customers who do more than \$20 bil/year in sales would reasonably expect a different schedule than regular Global 2000 customers who fall below \$20 bil/year.

Cumulative Net License Purchase Volume Discount Schedule for Global 200 class customers

\$0	to	\$249,999	10%
\$250,000	to	\$749,999	20%
\$750,000	to	\$1,499,999	25%
\$1,500,000	to	\$1,999,999	30%
\$2,000,000	to	\$2,499,999	35%
\$2,500,000	to	\$2,999,999	40%
\$3,000,000	to	\$3,999,999	45%
\$4,000,000	and above		50%

Cumulative Net License Purchase Volume Discount Schedule for Global 2000 class customers

\$0	to	\$249,999	10%
\$250,000	to	\$499,999	15%
\$500,000	to	\$749,999	20%
\$750,000	to	\$999,999	25%
\$1 mil	to	\$1,499,999	30%
\$1,500,000	and over		40%

135. FICO's actual discounts are in fact much larger than what they publish in the 2003 Global Price List.⁵⁷

136. It is my opinion that FICO's demands for more license fees and the assumptions behind FICO's models used to calculate those fees are not commercially reasonable and ignore Federal's actual use of Blaze.

D. FICO Chose Not to Utilize Its Audit Rights

137. The June 2006 "Verification and Audit Rights" clause in Section 3.5 states that:

⁵⁷ My research found that FICO provided deep discounts on many initial licenses, including, for example, licensing its software at zero cost to the licensee. See, FICO's software license agreement with Accenture LLP in 2008 that included a 100 percent discount. FICO 0047383 – 47399. Also see FICO 0043609 – 43645 where FICO gave a customer a 50 percent discount.

On Fair Isaac's written request, Client shall provide to Fair Isaac a written certification executed by an authorized officer of Client that provides the following information: i) verification that the Fair Isaac Products are being used in accordance with the provisions of this Agreement; (ii) list of the locations at which the Fair Isaac Products are or have been operated during the preceding twelve (12) month period; and (iii) the number of Seats, CPU's and/or applications accessing or utilizing the Fair Isaac Products (as applicable).

138. FICO can use this provision during the life of a license, but chose not to invoke this right in this matter.⁵⁸ In addition, FICO could have invoked the audit right as soon as they became aware of the merger but chose not to and, instead, have pursued litigation.

139. FICO's justification about expanded use of their technology due to the Federal merger would have been addressed if they invoked their right to audit Federal.⁵⁹ Not exercising this right to support such an allegation was not commercially reasonable and is further evidence that FICO was improperly trying to leverage the merger to collect unjustified fees.

140. In addition, FICO could have used this clause to determine the geographic locations where Federal was using Blaze at any point during the relationship prior to 2016. If FICO truly believe that the license was limited by territory, then industry norms dictate that it would have exercised this audit right.

⁵⁸ Deposition of Thomas Carretta, March 22, 2019, pp. 113-115.

⁵⁹ FICO's Mr. Waid proposed a "full audit of usage to ensure proper licensing" on March 23, 2016 which I understand never occurred. See Deposition of Michael Sawyer, October 2, 2018, Exhibit 83.

VIII. APPENDICES



**Steven R. Kursh, Ph.D., CSDP, CLP
Summary Biography**

Steven R. Kursh, Ph.D., CSDP, CLP is a seasoned management consultant and expert witness. He has extensive experience in the computer software industry, including engineering, licensing, marketing, valuation, and management; the Internet, including cloud-based services; intellectual property: trade secrets, trademarks, patents, and copyrights; and general business management at technology companies. His domain experience includes finance, health care, distribution, telecommunications, housing and real estate, and retail.

Steve was an Executive Professor at Northeastern University for over twenty years. He recently left the university to focus on research, consulting and other activities. While at Northeastern he conducted research, served in senior-level administration, and developed and taught graduate-level courses in the D'Amore-McKim School of Business and in the College of Engineering. Steve has been honored with several teaching awards.

He also has developed and taught courses at the University of Pennsylvania and Harvard University. More recently Steve co-developed a workshop "Blockchain and Bitcoin" for the MIT Enterprise Forum.

Dr. Kursh is a former Fulbright Scholar and the author of numerous articles, cases used in education, and a book published by Financial Times Prentice-Hall. He serves as a reviewer for AAAS (American Association for the Advancement of Science), IEEE (Institute of Electrical and Electronics Engineers) and numerous academic and practitioner publications in business, technology, and finance. He has obtained grants from federal agencies and private organizations to support his research and has recently had articles published on Strategic Implications of Fintech (Disruption) and Testing of Cloud Applications and Related Services.

A successful entrepreneur, his experience includes founding, funding, and exiting technology companies, including one that was purchased by a division of McGraw-Hill. He has served as a consultant to several technology companies seeking capital, assessing development processes, negotiating with prospective buyers and partners, and general management. Steve is a member of the Angel Capital Association and is an active investor and mentor to entrepreneurs.

He earned his A.B. at Boston College (*Magna Cum Laude*, Scholar of the College) and his Ph.D. at the University of Pennsylvania. Steve has earned the IEEE Computer Society Software Development Professional certification (CSDP) and the CLP designation (Certified Licensing Professional) from the Licensing Executives Society (LES). He serves as a member of the High Technology Leadership Committee of the LES.

He has been deposed over forty-five times and has testified in Federal Courts, State Courts, and before arbitration panels over twenty times in his career. He has worked for Bank of America, Barnes & Noble, Citigroup, EMC, HP, Honeywell, HSBC, IBM, Invesco, Marriott, MSCI, Regents of the University of California, SAIC, Samsung, Verizon, governments, private equity firms, and many other organizations.

Steven R. Kursh, Ph.D., CSDP, CLP
Summary Biography and CV
May 2019

Professional Experience

Founder and Managing Member

Software Analysis Group (www.softwareanalysisgroup.com)

September 1994 to present

- Provide consulting and business advisory services including technology, valuation and business due diligence to Global 2000/Fortune 500 companies, closely-held businesses, and investors.
- Angel investor and mentor capitalist, software and technology ventures.
- Provide litigation support services to international and national law firms, including serving as an expert witness or consultant in matters relating to software intellectual property (patents, trade secrets, copyrights and trademarks); the computer software industry (industry customs and practices in licensing, software development, software implementations, management, marketing, valuation, and contract compliance); the Internet (e-commerce), including SaaS, PaaS, and IoT; government contracts; blockchain, Fintech, and telecommunications (including mobile). Work includes submissions to the Patent Trial and Appeal Board.
- Admitted as an expert before arbitration panels, state courts, and federal courts.

Founder and President

Blackacre Financial Software, Inc.

September 1986 to August 1994

(Sabbatical Year from September 1993 to August 1994)

- Responsible for general management of a financial and legal software company. Tasks included negotiating license agreements with clients, joint development agreements with partners, reseller agreements with distribution channel partners, and licenses with other technology developers.
- Developed and executed software architecture and design strategies, including leadership of the company's internal programming and external (*i.e.* outsourced) programming and consulting teams that installed, configured, and customized the company's workflow software at client sites.
- Grew company from zero sales to leading market position with more than 200 independent resellers; clients included Citicorp, Dime Savings Bank, Shawmut Bank, law firms, title insurance companies, and mortgage companies.
- Negotiated sale of company's assets, including copyrighted software and trademarks, to McGraw-Hill.

Steven R. Kursh, Ph.D., CSDP, CLP
Summary Biography and CV
May 2019

Consultant

Omega, Consultants to Bank Management
May 1984 to September 1986

- Provided technical support and revisions to the commercial credit products, including *Commercial Loans to Business* and *Understanding Business Cashflow*, (then) the leading commercial lender training systems in the world.
- Provided consulting services relating to commercial banking and retail banking to financial institutions including Bank of America, Norwest, Wells Fargo, Bank of Boston, and Chase.
- Designed and developed software that linked the company's commercial credit products with credit analysis software; developed tests and statistical norms for evaluating commercial loan officers.
- Awarded Rising Star Award for outstanding contributions to the company.

Academic Appointments

Executive Professor and Associate Academic Specialist

D'Amore-McKim School of Business (also teach courses in the College of Engineering)
Northeastern University, Boston, MA 02115

September 1994 to May 2018; June 1980 to May 1984 (took leave of absence to work in industry)

- Develop and teach courses in the College of Business and the College of Engineering. Courses taught include Finance, Financial Strategy, Disruption in the Financial and Insurance Services Industries, Managerial Economics, Telecommunications, and multidisciplinary courses that include topic coverage of software architectures, software project implementations, Information Technology (IT) investments, Mobile E-Commerce, and IT assessments.
- Earned Beta Gamma Sigma Awards for Best Teacher and University Excellence in Teaching Award. Teaching evaluations consistently among the highest in the university.
- Develop and teach Continuing Professional Education courses in Business Analytics and Decision Tools, Making the Business Case, Making the Business Case for Cloud, Software Project Management, Innovation and Growth, and Intellectual Property and Valuation to CPAs, attorneys, project managers, and other professionals. Teaching evaluations among the highest for all instructors in these programs.
- Developed and taught classes for Level I and Level II of the Chartered Financial Analyst (CFA) Examination.

Steven R. Kursh, Ph.D., CSDP, CLP
Summary Biography and CV
May 2019

- Principal investigator in joint business and engineering education project funded by the General Electric Foundation; awarded grant by the Kauffman Foundation.
- Academic Coordinator, MBA Programs (1996-1998); Director, MBA Team Consulting Projects (1995-1998); serve on committees, including Chair of Undergraduate Programs Committee (1994-1995), Graduate Programs Committee (1999-2000; 2003-2005) and College Technology Committee (2000–2007).
- Faculty Associate, Center for Information Systems Deployment (2004 to 2007).
- Ph.D. Advisor and Dissertation Committee, Ms. Kholoud Khateeb, College of Engineering (graduated, December 2014).
- Co-Director, MSI Program (formerly the High-Technology MBA Program; the High-Technology program was consistently ranked among the best technology-focused MBA programs in the country. The students were (are) mid-career and early-career professionals with backgrounds and positions primarily in engineering and science; [September 2013 to December 2014]).

Co-Developer

MIT Enterprise Forum

Spring Semester 2018

- Co-developed Blockchain and Bitcoin course.

Fulbright Scholar

Leon Kozminski Academy of Entrepreneurship and Management (award granted for my research and teaching at this institution)
Warsaw, Poland

Fall Semester 2005

- Developed and taught courses and conducted research related to innovation, information technologies, and finance.

Instructor

Harvard University, Summer School Programs and Extension School

June 2004 to May 2005

- Developed and taught two courses: Capital Acquisition and the Investment Banking Process; Starting and Growing a Business.

Steven R. Kursh, Ph.D., CSDP, CLP
Summary Biography and CV
May 2019

Education and Professional Certifications

University of Pennsylvania

- Ph.D. awarded May 1983; City and Regional Planning Graduate Group; major course work and concentrations (Preliminary Examinations) in Housing and Real Estate, Finance (Wharton School), and Marketing (Wharton School). Additional course work in Accounting, Economics, Statistics, and Econometrics; learned and used APL, Fortran, SPSS, and BMDP in research and courses.
- Research Fellow (1975 and 1979); Graduate Teaching Assistant (1976-1977).
- Grader, Wharton MBA Marketing and Marketing Research Courses (1979-1980).
- Developed and taught graduate courses in Statistics and Real Estate Finance (1978-1979).

Boston College

- A.B. degree awarded May 1975, major in Political Science; Honors Program, *Magna Cum Laude, Scholar of the College*; learned and used Fortran and Basic for academic courses in Economics.

Certification and Continuing Professional Education

- **CLP** – Certified Licensing Professional. Certification by the Licensing Executives Society (LES), July 2008. (Certification requires documentation of competencies in business, technology and the law. Candidates must also now take an examination.) Recertified in July 2011; 2014 and 2017.
- **CSDP** - Certified Software Development Professional. Certification by the Institute of Electrical and Electronics Engineers (IEEE), June 2004. (Certification requires documentation of at least 9,000 hours of professional work in software development and passage of an examination covering the Software Engineering Body of Knowledge.) Recertified in June 2007; 2010; 2013; certification permanent in 2015.
- Participate in live and distance-learning courses offered by the Association for Computing Machinery (ACM), the Institute for Electrical and Electronics Engineers (IEEE), and other organizations including Microsoft, IBM, and Oracle, 1987 to present.
- Participated in courses offered by the Institute for Business Appraisers (IBA); passed certification examination for business valuation.

Academic and Professional Service

Editorial and Reviewer

Reviewer, Academy of Management Annual Meeting, Boston, 2019.

Steven R. Kursh, Ph.D., CSDP, CLP
Summary Biography and CV
May 2019

Licensing Executives Society, High-Tech Sector, Co-Leader Committee on Blockchain and Fintech, 2018 to present.

Reviewer, Academy of Management Annual Meeting, Chicago, 2018.

Judge, VietChallenge Business Competition, January 2016 to April 2016.

Reviewer, Ruane Award for Best Business Education Innovation Paper/Article, (Committee Member); 2016 Award and 2017 Award.

Reviewer, Research Competitiveness Program, American Association for the Advancement of Science, March 2014 to present.

Reviewer, *IEEE Security & Privacy*, January 2013 to present; *IEEE Computer*, January 2013 to present.

Reviewer, Academy of Business Education and Financial Education Association Annual Meetings, Fall 2009 to present.

General Editor and Reviewer, Pearson Custom Business Resources Program, Finance and Information Technology, January 2005 to December 2016.

Program Committee and Chair, Finance and Technology Session, Financial Education Association Annual Meeting, Orlando, Florida, April, 2003.

Program Committee, Academy of Business Education Annual Meeting, Key West, Florida, September 2002. (Reviewed abstracts and papers pertaining to Information Technology and Finance.)

Reviewer, "Intuit ProSeries Software (A) & (B)," Western Casewriters Association 2002 Meeting, Santa Fe, New Mexico, March 2002.

Reviewer and Panel Participant, National Case Research Association Annual Meeting, San Antonio, Texas, September 2000.

Reviewer, Information Technology and Finance Cases, *Journal of Business Education*, *Journal of Financial Education*, and *National Case Research Association Journal*, September 2000 to present.

Selected Presentations

"Blockchain: What You Need to Know," Presentation before Senior Management, Cardinal Health, Boston, MA, October 2017.

Panel Participant, "Building Your IP Litigation Dream Team," IP Counsel Exchange, New York, NY, December 2018.

"Surfing Through the Storm of FinTech Disruption in Financial Services: A Case Study of Payment Processing," Paper accepted for presentation, Academy of Management Annual Meeting 2017, Atlanta Georgia, August 2017.

"Blockchain, Fintech and the DMSB," Presentation before the DMSB Board of Visitors, June 9, 2017.

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“Innovation in the Financial Services Industry: An Empirical Investigation of the Fintech Ecosystem and Implications for Company Strategies,” Paper accepted for presentation, IEEE International Conference on Cloud Engineering (IC2E) 2017, Vancouver, British Columbia, April 2017.

“D’Amore-McKim School of Business Finance Practice Symposium: Fintech: New Trends and Strategies,” Co-coordinator and MC, November 14, 2016.

“Cloud Computing: Teaching About A Technology that Is Changing Business,” Paper accepted for presentation, ABE/FEA Annual Meeting, San Antonio, TX, September 2015, (with F. Arthur Schnure).

“New Sources of Financing for Entrepreneurial Ventures: Frameworks and Analytics for Entrepreneurial Finance: A Focus on Funding with the EB-5 Program,” Paper accepted for presentation, ABE/FEA Annual Meeting, Savannah, Georgia, September 2014.

“Financing Your Entrepreneurial Venture: Crowdsourcing, EB-5, and New Sources of Capital for Startups and Growing Ventures,” Presentation (invited speaker), Harvard Program for Asian and International Relations, February 2014.

“New Types of Finance: CrowdSourcing and the American JOBS Act,” Paper accepted for presentation, ABE/FEA Annual Meeting, Bermuda, September 2013.

Panel Participant, “Working Successfully With Computer Experts in IP Litigation.” Boston Bar Association Brown Bag Lunch, Boston, MA, December 2012.

Panel Participant, “Software – To Patent or Not To? Algorithms and Automation as Patentable Subject Matter.” HBSR Seminar, Waltham, MA, November 2012.

“Teaching Financial Management and Stock Valuation Using Trefis.com: How It Works and What It Means for Our Students.” Paper accepted for presentation at Academy of Business Education, Annual Meeting, September 2011, Orlando, Florida.

“Mobile Application Frameworks.” Workshop Moderator, Mobile Bootcamp, Mobile Monday, MIT, Cambridge, MA, February 2011.

“The Intersection of Intellectual Property and Open Source.” Interview, *Chief Intellectual Property Officer*, August 2007.

“The Use of Real Options and Monte Carlo Simulations In The Analysis of IT Investments.” Paper accepted for presentation, IEEE Equity 2007 Conference, March 2007, Amsterdam, The Netherlands.

“Enterprise Risk Management & Governance.” Roundtable Session Moderator, Cutter Consortium Summit 2005, May 2005, Cambridge, Massachusetts.

“Teaching the Assessment and Valuation of Intellectual Property.” Academy of Business Education, Annual Meeting, April 2005, Orlando, Florida.

“Using Real Options in a Multidisciplinary Approach for Evaluating and Executing Business Investments That Grow Shareholder Value.” Annual Meeting, Society for Advancement of Management, March 2004, Baltimore, MD, (with James Donovan).

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Panel Participant (materials used), "Managing IT Risk: The Role of the CFO." Financial Executives International Forum on Finance & Technology, Las Vegas, Nevada, September 2002.

Program Moderator, "Today's Funding Climate and Its Effects on Valuations." Program Moderator, Massachusetts High Tech Pulse of Technology Series, Waltham, MA, June 2002.

"Business and Engineering Education: Working Together." Paper to have been presented at the Academy of Business Education Annual Meeting, Jackson Hole, Wyoming, September 2001. (Meeting cancelled due to 9/11 tragedy.)

Provided written testimony (regarding the Internet and IT infrastructure) at the request of the Chief Counsel, to the US Senate Judiciary Committee, US Congress, June, 2001.

"Connections: The SMILE Project: Business and Engineering Students Working in Teams." Presentation at the National Science Foundation Regional Conference on Educational Reform, Boston, Massachusetts, April 1997 (with A. Basil, A. Touran, and G. Volland)

Selected Articles and Other Publications

"Should You Use Smart Contracts," *Cutter Business Technology Journal*, April 2018 (with Natalia A. Gold and F. Arthur Schnure).

"Counterrevolutionaries in the Financial Services Industry: Teaching Disruption – A Case Study of RoboAdvisors and Incumbent Responses," *The Business Education Innovation Journal*, Vol. 9. 1, June 2017, (with Natalia A. Gold).

"Adding Fintech and Blockchain to Your Curriculum," *The Business Education Innovation Journal*, Vol. 8, 2, December 2016, (with Natalia A. Gold).

"Fintech and Blockchain for Senior IT Managers," *Cutter Business Technology Journal*, December 2016, (with F. Arthur Schnure).

"Getting Cloud (and Non-Cloud) Web Application Performance Testing Right," *Cutter Business Technology Journal*, May 2015 (with F. Arthur Schnure).

"Mobile Devices, Marketing, and Content Management Systems." *Cutter Data Insight & Social BI, Executive Update*, May 2012.

"Social Media and Unified Communications: Turning Cost Centers to Profit Opportunities in the Enterprise." *Cutter Data Insight & Social BI, Executive Update*, December 2011.

"Mobile Opportunities and Strategic Challenges: Choosing an OS." *Cutter Business-IT Advisory Service Executive Update*, May 2011.

"Mobile Opportunities and Strategic Challenges: Part I." *Cutter Business-IT Advisory Service Executive Update*, April 2011.

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"Developing and Using A Financial Model for Virtualization Technology Investment: Part II." *Cutter Business-IT Advisory Service Executive Report*, September 2008 (with Pratike Patel).

"Developing and Using A Financial Model for Virtualization Technology Investment: Part I." *Cutter Business-IT Advisory Service Executive Report*, September 2008 (with Pratike Patel).

"Managing Your Software Journey: Using Earned Value and Other Metrics." *Cutter Business-IT Advisory Service Executive Report*, August 2006.

"A Better Way To Do ROI Analysis of Software Investments." *Cutter Business-IT Advisory Service Executive Report*, July 2005.

"An Analysis of the Impact of FCC Regulations on Competitive Local Exchange Carriers and Emerging Next Generation Networks." *Proceedings of the Emerging Issues in Business & Technology Conference*, October 2003, p. 175-183, (with Anurag Mehndiratta).

"Going the Distance with Web-Based Training." *Training & Development*, American Society for Training and Development, March 1998, p. 50-53.

Blackacre's RESPA. Colorado Springs, Colorado: Shepard's/McGraw-Hill, 1994 edition (released in 1995). (Leader of team that developed computer software and documentation for the then-leading real estate finance software in the nation.)

The Blackacre Conveyancer. Wellesley, Massachusetts: Blackacre Financial Software, 1987, 1990, and 1993. (Leader of team that developed computer software and documentation.)

Blackacre's Foreclosure System. Wellesley, Massachusetts: Blackacre Financial Software, 1987 and 1990. (Leader of team that developed computer software and documentation.)

New York Net Worth Statement. Wellesley, Massachusetts: Blackacre Financial Software (with Julius Blumberg, Inc.), 1992. (Leader of team that developed computer software and documentation.)

"Forever You Cosmetics: Managing the Lender-Customer Relationship." *Lending for the Commercial Banker*, Spring 1987, p. 69-75.

"An Acquisition Gone Bad: The Challenge of A Loan Workout." *Lending for the Commercial Banker*, Winter 1987, p. 73-78, (with James Maclean).

"Guttenberg Printing Equipment Update: Managing an Ongoing Relationship." *Lending for the Commercial Banker*, Autumn 1986, p. 70-74, (with John Cunningham).

"Leveraged Buyout Opportunity Presents Challenge to Bank." *Lending for the Commercial Banker*, Summer 1986, p. 67-72, (with John Curtin).

"Guttenberg Printing Equipment: Frustrations and Opportunities in a New Relationship." *Lending for the Commercial Banker*, Spring 1986, p. 68-74, (with John Cunningham).

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"Three Essays Exploring the Impact of Higher Energy Prices on Housing Markets."
Unpublished Ph.D. dissertation, University of Pennsylvania, 1983.

Peer-Reviewed Academic Cases

"Street Furniture: Business Model Design." *Journal of Academy of Business Education*. 14, Spring 2013, (with Marc Meyer and Fred Crane).

"Teaching Note for Street Furniture: Business Model Design." *Journal of Academy of Business Education*. Spring 2013, (with Marc Meyer and Fred Crane). (The teaching note is provided to professors upon request.)

"ElderAlert: Building a Business Model for a Home Healthcare Automation Venture." *International Review of Entrepreneurship*. 10 (4), (with Marc Meyer).

"Teaching Note for ElderAlert: Building a Business Model for a Home Healthcare Automation Venture." *International Review of Entrepreneurship*. 10 (4), (with Marc Meyer). (The teaching note is provided to professors upon request.)

"The Server Consolidation Case." *Journal of Academy of Business Education*, 12, 170-188, (with Marc Meyer and Krishna Valluru).

"Teaching Note for The Server Consolidation Case." *Journal of Academy of Business Education*, (with Marc Meyer and Krishna Valluru). (The teaching note is provided to professors upon request.)

"Bioblood: M&A in the Biotech World." *International Journal of Entrepreneurial Education*, 6, 2, 2008, (with Marc Meyer, John Friar, and Dennis Shaughnessy).

"Teaching Note for Bioblood: M&A in the Biotech World." *International Journal of Entrepreneurial Education*, (with Marc Meyer John Friar, and Dennis Shaughnessy). (The teaching note is provided to professors upon request.)

"Mercedes-Benz: Investing in IT Infrastructure." Ivey School of Business, University of Western Ontario, Harvard Business School Publishing, 2006 (with Michael Hoch).

"Mercedes-Benz: Investing in IT Infrastructure." Teaching Note, Ivey School of Business, University of Western Ontario, Harvard Business School Publishing, 2006. (The teaching note is provided to professors upon request.)

"Implications of Streaming Media: A Technical Note." Ivey School of Business, University of Western Ontario, Harvard Business School Publishing, 2006 (with Michael Hoch).

"Bell Financial Software, Inc." *Journal of Financial Education*, Fall 2005, 31, p. 99-112.

"Teaching Note for Bell Financial Software, Inc." *Journal of Financial Education*, Fall 2005, 31. (The teaching note is provided to professors upon request.)

"Note on Valuing Computer Software and Computer Software Companies." *Journal of Financial Education*, Fall 2005, 31, p. 113-124.

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“The Bank for Savings.” Case Research Association, January 1983.

“Teaching Note: The Bank for Savings.” Case Research Association, January 1983.

“The Boston Office Supply Company (A) and (B).” Harvard Business School Publishing, Boston, MA (with John Edmunds). March 1983.

“Research Ethics and Managers in the Public and Not-for-Profit Sectors (A).” Harvard Business School Publishing, Boston, MA (with Nan Rubenstein), September 1980.

Other Publications: US Patent and Book

Inventor, US Patent 7,110,952, “Computer Accounting Method Using Natural Language Speech Recognition.” Patent awarded September 19, 2006.

Minding the Corporate Checkbook: A Manager’s Guide for Executing Successful Business Investments, (with James Donovan), March 2004, (Financial Times Prentice-Hall, New York).

Expert Witness Testimony

HealthEdge Software, Inc. v. TML Multistate IEBP, JAMS Arbitration, Hearing testimony, April 2019.

Toys “R” Us, Inc., *et al.*, United States Bankruptcy Court for the Eastern District of Virginia, Richmond Division, Deposition testimony, November 2018; Trial testimony, November 2018.

Armour Capital Management LP v. SS&C Technologies, Inc., United States District Court for the District of Connecticut, New Haven Division, Deposition testimony, August 2018.

Stanley W. Mastil, Distribution Trustee of Compresses, Inc. v. Thomas Campbell, John Macfarlane and Daniel Scherder, Superior Court of the District of Columbia, Deposition testimony, August 2018.

LivePerson, Inc. v. [27]7.AI, Inc., United States District Court for the Northern District of California, Deposition testimony, June 2018.

Erica S. DeSouza v. Francis A. DeSouza, Superior Court of the State of California, for the County of San Francisco, Deposition testimony, May 2018 and June 2018; Trial testimony, June 2018.

Vertex Inc. v. Bottomline Technologies, American Arbitration Association, Hearing testimony, May 2018.

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Ameranth Patent Litigation, United States District Court for the Southern District of California, Deposition testimony, May 2018.

Glotech USA, Inc. v. Bluebird, Inc., A/K/A Bluebird Soft, Inc., United States District for the District of New Jersey, Deposition testimony, January 2018.

Vesta Corporation v. Amdocs Management Limited; Amdocs, Inc., United States District Court for the District of Oregon, Portland Division, Deposition testimony, January 2018.

Transverse, LLC v. Info Directions, Inc., Iowa District Court for Polk County, Deposition testimony, November 2017.

Cisco Systems, Inc. and Cisco Systems Capital Corporation v. HP, Inc. v. Cisco Systems, Inc. and Cisco Systems Capital Corporation, Superior Court of California, County of Santa Clara, Deposition testimony, April 2017.

InfoDelli, LLC and Breht C. Burri v. Western Robidoux, Inc., et al, United States District Court, Western District of Missouri, Deposition testimony, February 2017.

The Regents of the University of California v. Paul S. Aisen et al, United States District Court for the Southern District of California, Deposition testimony, December 2016.

Government of The District of Columbia, Contract Appeals Board, Black Creek Integrated Systems, CAB No. D-1500, Deposition testimony, July 2016; Trial testimony, February 2017.

Research in Progress

Financing Your Venture From Startup to Riches. Book manuscript.

“A Realistic Look at Blockchain in the Enterprise: Following Pathways of the Past,” (with F. Arthur Schnure).

“Five Lessons for Teaching FinTech to Business Students.”

Memberships

Member of: the Academy of Management; the Association for Computing Machinery (ACM); the FinTech Sandbox; the Institute of Electrical and Electronics Engineers (IEEE); the Licensing Executives Society (LES); and the Angel Capital Association.

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Recent Media

“Is Yahoo’s Internet Business Worth \$3 Billion,” *Marketplace*®, NPR, June 7, 2016.

“FinTech: Changing the Way We Do Business,” *Leaders@Work*, DMSB, Northeastern University, November 3, 2016.

Contact and Personal Information

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Married; three (grown) children

Excellent Health; avid runner

APPENDIX B

LISTING OF MATERIALS REVIEWED

In addition to the materials referenced in the attached report I also reviewed the following:

Discovery Documents:

- Summons & Complaint, dated 04/21/2016
- Order Granting in Part and Denying in Part Defendant's Motion to Dismiss, dated 12/22/16
- Amended Complaint, dated 02/01/17
- Answer and Counterclaims to Amended Complaint, dated 02/15/17
- FICO's First Set of Interrogatories to Defendant, dated 04/11/2017
- FICO's First Set of Requests for Admission to Defendant, dated 04/11/2017
- FICO's First Set of Requests for Production of Documents to Defendant, dated 04/11/2017
- Federal's First Set of Requests for Production of Documents to FICO, dated 04/18/2017
- Federal's Response to Plaintiff's First Set of Requests for Admission, dated 05/11/2017
- Federal's Response to Plaintiff's First Set of Requests for Production of Documents, dated 05/11/2017
- FICO's Responses to Defendant's Requests for Production of Documents, dated 05/18/2017
- FICO's First Supplemental Answers to Defendant's First Set of Interrogatories, dated 08/16/2017
- FICO's Second Set of Interrogatories to Defendant (15-21), dated 12/29/2017
- FICO's Second Set of Requests for Production of Documents, dated 12/29/2017
- FICO's Second Set of Requests for Admission to Defendant, dated 12/29/2017
- Federal's Answers to Plaintiff's Second Set of Interrogatories (15-21), dated 01/29/2018
- Federal's Response to Plaintiff's Second Set of Requests for Admission, dated 01/29/2018
- Federal's Response to Plaintiff's Second Set of Requests for Production of Documents, dated 01/29/2018
- FICO's Second Supplemental Answers to Defendant's Interrogatory Nos. 6-9, dated 04/23/2018
- Federal's Second Supplemental Answer to Interrogatory No. 6 and Supplemental Answer to Interrogatory No. 21, dated 06/07/2018
- Second Amended Complaint Filed Under Seal, dated 09/11/18
- Second Amended Complaint Redacted, dated 09/11/18
- Answer to Second Amended Complaint and Counterclaim, dated 10/10/18

- Federal's Second Set of Requests for Production of Documents to FICO, dated 11/12/2018
- FICO's Responses to Defendants' Second Requests for Production of Documents, dated 12/12/2018
- Federal's Third Set of Requests for Production of Documents to FICO, dated 12/28/2018
- Letter from Christopher D. Pham, dated 12/31/2018
- FICO's Responses to Defendants' Third Requests for Production of Documents, dated 01/28/2019
- Federal's Renewed and Second Amended Notice of 30(b)(6) Deposition of Plaintiff Fair Isaac Corporation, dated 02/05/2019
- Sixth Amended Pretrial Scheduling Order, dated 02/11/19
- Federal 's Fourth Set of Requests for Production of Documents to FICO, dated 02/20/2019
- Subpoena to Produce Documents, Information, or Objects or to Permit Inspection of Premises to Xerox Corporation, dated 02/21/2019
- Subpoena to Produce Documents, Information, or Objects or to Permit Inspection of Premises to Dell USA, L.P., dated 02/21/2019
- Subpoena to Produce Documents, Information, or Objects or to Permit Inspection of Premises to Aetna Life Insurance Company, dated 02/21/2019
- Federal's Fourth Supplemental Answer to Plaintiff's Interrogatory No. 19, dated 02/28/2019
- Federal's Third Supplemental Answer to Plaintiff's Interrogatory No. 17, dated 02/28/2019
- Federal's Supplemental Responses to Plaintiff's Fourth Set of Requests for Production of Documents, dated 03/04/2019
- Federal's Notice of 30(b)(6) Deposition of FICO (Thomas Carretta), dated 03/11/2019
- Federal's Fifth Supplemental Answer to Plaintiff's Interrogatory No. 20, dated 03/21/2019
- Federal's Fifth Supplemental Answer to Plaintiff's Interrogatory No. 16 and Sixth Supplemental Answer to Plaintiff's Interrogatory No. 17, dated 03/21/2019
- Federal's Sixth Supplemental Answer to Plaintiff's Interrogatory No. 18, dated 03/21/2019
- FICO's Answers to Defendant's Third Set of Interrogatories, dated 03/22/2019
- FICO's Responses to Defendants' Fourth Requests for Production of Documents, dated 03/22/2019
- FICO's Amended Response to Interrogatory No. 20, dated 04/01/2019
- Pleadings Register (Prepared by F&B)
- 04/01/2019 email from Ryan Young to Andrew Temkin re: Oracle's Responses and Objections to Subpoena to Produce Documents

Deposition Transcripts & Deposition Exhibits:

- 30(b)(6) of William Paul Waid, taken 01/16/2019 & exhibits 82, 97, 99, 104-113, 125, 220-236
- 30(b)(6) of William Waid, taken 04/02/2019 & exhibits 419-433, 435-443, 82, 110, 230, 257, 259, 266
- Tamra Pawloski, taken 01/18/2019 & exhibits 237-270
- Benjamin Baer, taken 01/29/2019 & exhibits 191-193, 291-295
- Chris Ivey, taken 01/30/2019 & exhibits 296-301
- Chris Ivey, taken 03/14/2019 & exhibits 52, 54, 60, 120, 239, 338-382
- Jandeen Boone, taken 02/06/2019 & exhibits 305-330
- Kevin Harkin, taken 03/25/2019 & exhibits 158, 403-418
- Lawrence Wachs, taken 02/26/2019 & exhibits 331-337
- Michael Sawyer, taken 10/02/2018 & exhibits 47, 54, 63, 65, 69, 71-84
- Oliver Clark, taken 09/11/2018 & exhibits 46-70
- Russell Schreiber, taken 10/24/2018 & exhibits 105-145
- Thomas Carretta, taken 10/09/2018 & exhibits 47, 60, 80, 85-104
- Henry Mirolyuz, taken 01/11/2019 & exhibits 178-219
- Henry Mirolyuz, taken 07/31/2018 & exhibits 1-16
- Thomas Carretta, taken 03/22/2019

Documents Produced by Federal Insurance Company:

- | | |
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| • FED000046_0001-FED000046_0016 | • FED000340_0001-FED000340_0001 |
| • FED000049_0001-FED000051_0022 | • FED000342_0001-FED000342_0003 |
| • FED000064_0001-FED000064_0030 | • FED000347_0001-FED000348_0001 |
| • FED000068_0001-FED000068_0028 | • FED000350_0001-FED000350_0001 |
| • FED000112_0001-FED000112_0068 | • FED000361_0001-FED000362_0004 |
| • FED000122_0001-FED000122_0029 | • FED000420_0001-FED000420_0001 |
| • FED000127_0001-FED000127_0004 | • FED000514_0001-FED000514_0001 |
| • FED000141_0001-FED000141_0004 | • FED000700_0001-FED000700_0003 |
| • FED000143_0001-FED000143_0006 | • FED000703_0001-FED000703_0003 |
| • FED000171_0001-FED000171_0028 | • FED000713_0001-FED000713_0005 |
| • FED000185_0001-FED000185_0007 | • FED000718_0001-FED000718_0001 |
| • FED000190_0001-FED000190_0009 | • FED000755_0001-FED000755_0001 |
| • FED000195_0001-FED000195_0002 | • FED001016_0001-FED001016_0001 |
| • FED000243_0001-FED000243_0024 | • FED001020_0001-FED001020_0001 |
| • FED000252_0001-FED000252_0015 | • FED001083_0001-FED001084_0002 |
| • FED000255_0001-FED000255_0034 | • FED001101_0001-FED001101_0002 |
| • FED000259_0001-FED000259_0026 | • FED001104_0001-FED001104_0018 |
| • FED000278_0001-FED000278_0153 | • FED001151_0001-FED001151_0002 |
| • FED000280_0001-FED000280_0016 | • FED001164_0001-FED001164_0002 |
| • FED000287_0001-FED000287_0019 | • FED001180_0001-FED001180_0002 |
| • FED000289_0001-FED000289_0024 | • FED001289_0001-FED001289_0004 |
| • FED000294_0001-FED000294_0021 | • FED001311_0001-FED001312_0021 |

- FED001314_0001-FED001314_0021
- FED001320_0001-FED001320_0028
- FED003112_0001-FED003112_0009
- FED003261_0001-FED003261_0001
- FED003339_0001-FED003339_0001
- FED003989_0001-FED003989_0020
- FED004079_0001-FED004079_0027
- FED004420_0001
- FED004431_0001-FED004431_0003
- FED004434_0001-FED004437_0001
- FED004458_0001-FED004458_0002
- FED004506_0001-FED004506_0004
- FED004524_0001-FED004527_0003
- FED004531_0001-FED004531_0002
- FED004533_0001-FED004535_0010
- FED004549_0001-FED004550_0003
- FED004587_0001-FED004587_0002
- FED004617_0001-FED004617_0001
- FED004625_0001-FED004625_0001
- FED004629_0001-FED004629_0002
- FED004637_0001-FED004637_0001
- FED004736_0001-FED004736_0003
- FED004790_0001-FED004790_0021
- FED004839_0001-FED004839_0022
- FED004844_0001-FED004844_0040
- FED004896_0001-FED004896_0002
- FED004946_0001-FED004946_0007
- FED005053_0001-FED005053_0002
- FED005090_0001-FED005090_0002
- FED005190_0001-FED005190_0011
- FED005204_0001-FED005204_0012
- FED005214_0001-FED005214_0012
- FED005221_0001-FED005221_0012
- FED005307_0001-FED005307_0056
- FED005476_0001-FED005476_0016
- FED005942_0001-FED005942_0050
- FED006068_0001-FED006068_0006
- FED006228_0001-FED006228_0013
- FED006246_0001-FED006246_0027
- FED006248_0001-FED006248_0013
- FED006252_0001-FED006252_0108
- FED006288_0001-FED006288_0001
- FED006504_0001-FED006504_0013
- FED006662_0001-FED006662_0032
- FED006784_0001-FED006784_0038
- FED006995_0001-FED006995_0024
- FED007235_0001-FED007235_0032
- FED007789_0001_FED007789_0002
- FED007797_0001-FED007797_0001
- FED008145_0001-FED008145_0011
- FED008281_0001-FED008281_0042
- FED008352_0001-FED008352_0002
- FED008454_0001-FED008454_0009
- FED008555_0001-FED008555_0005
- FED008650_0001-FED008650_0014
- FED008759_0001-FED008760_0003
- FED009056_0001-FED009056_0033
- FED009281_0001-FED009281_0013
- FED009624_0001-FED009625_0001
- FED009630_0001-FED009631_0001
- FED009894_0001-FED009894_0004
- FED010117_0001-FED010117_0017
- FED012128_0001-FED012128_0014
- FED012130_0001-FED012130_0021
- FED013515_0001-FED013520_0343
- FED013522_0001-FED013533_0330
- FED013535_0001-FED013537_0292
- FED013557_0001-FED013557_0065
- FED013839_0001-FED013839_0018
- FED014415_0001-FED014415_0003
- FED015545_0001-FED015545_0028
- FED016590_0001-FED016590_0002
- FED016599_0001_FED016599_0008
- FED016602_0001-FED016602_0013
- FED016653_0001-FED016653_0015
- FED016737_0001-FED016737_0003
- FED017176_0001-FED017176_0011
- FED017882_0001-FED017886_0001
- FED017912_0001-FED017913_0002
- FED017914_0001

Documents Produced by FICO:

- FICO0000005
- FICO0000055
- FICO0000057-FICO0000058
- FICO0000060-FICO0000061
- FICO0000193-FICO0000194
- FICO0000198-FICO0000199

- FICO0000208-FICO0000228
- FICO0000259-FICO0000261
- FICO0000275-FICO0000278
- FICO0000307-FICO0000324
- FICO0000381
- FICO0000461-FICO0000462
- FICO0000645-FICO0000647
- FICO0000657-FICO0000659
- FICO0000700
- FICO0000734
- FICO0000767
- FICO0000828-FICO0000836
- FICO0000852-FICO0000854
- FICO0000859-FICO0000861
- FICO0000885-FICO0000887
- FICO0000926-FICO0000927
- FICO0000929-FICO0000932
- FICO0000971
- FICO0001381
- FICO0001424-FICO0001425
- FICO0001576-FICO0001577
- FICO0001882-FICO0001883
- FICO0001903-FICO0001909
- FICO0001916-FICO0001918
- FICO0001923-FICO0001924
- FICO0002036-FICO0002057
- FICO0002118-FICO0002119
- FICO0002804
- FICO0002842-FICO0002846
- FICO0002965
- FICO0004656-FICO0004658
- FICO0005981-FICO0005982
- FICO0006682
- FICO0006709
- FICO0006724
- FICO0006783-FICO000687
- FICO0006792
- FICO0006798
- FICO0006843-FICO0006849
- FICO0006869
- FICO0006874-FICO0006895
- FICO0006928
- FICO0006944-FICO0006976
- FICO0006989-FICO0007030
- FICO0007072
- FICO0007109
- FICO0007145
- FICO0007152
- FICO0007159
- FICO0007227-FICO0007231
- FICO0007254
- FICO0007256
- FICO0007313
- FICO0007316
- FICO0007337-FICO0007348
- FICO0007362
- FICO0007374-FICO0007389
- FICO0007456
- FICO0007461
- FICO0007493
- FICO0007509
- FICO0007548-FICO0007554
- FICO0007562-FICO0007564
- FICO0007579-FICO0007594
- FICO0007651-FICO0007665
- FICO0007673
- FICO0007675
- FICO0007713
- FICO0007718
- FICO0007740-FICO0007742
- FICO0007778
- FICO0007916
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- FICO0007938
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Third Party Produced Documents:

- ORCL_FICO00000001-ORCL_FICO00000263

Other Public Documents:

- Chubb Corporation Annual Report, dated 12/31/2013
- Chubb Corporation Annual Report, dated 12/31/2014
- Chubb Corporation Annual Report, dated 12/31/2015
- Chubb Corporation Annual Report, dated 12/31/2016
- Chubb Corporation Annual Report, dated 12/31/2017
- Chubb Corporation Annual Report, dated 12/31/2018
- Chubb Insurance Company of Europe SE Solvency and Financial Condition Report, dated 12/31/2016
- Chubb Insurance Company of Europe SE Solvency and Financial Condition Report, dated 12/31/2017
- ACE Limited Annual Report, dated 08/03/2015
- AM Best Affirms Credit Ratings of Chubb Limited and Its Subsidiaries, dated 12/31/2018